The Harveian Lectures

ON

DISEASE, ITS TREATMENT AND THE PROFESSION OF MEDICINE IN 1899.

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LECTURE I.

Delivered on Dec. 1st.

THE PRESENT ASPECTS OF DISEASE.

GENTLEMEN,—In addressing you to-day at the bidding of the President and Council I feel that the responsibility of the choice is theirs, not mine, and I need say little of my inadequacy to an honour which is alike difficult to accept, to refuse, or worthily to fulfil. Disease, treatment, and the profession of medicine are topics vast and varied yet capable of being brought into harmony; but in connexion with them your attention will be invited only for those changes which are special to our times. The more I have thought the closer has seemed to me to be the mutual influence at work between the circumstances of the medical profession and those of disease and of treatment. Their joint consideration might perhaps lead to a better understanding of some of our medical anomalies. It would be difficult to find facts possessing any novelty for a learned audience such as this. But in opinions there is endless variety and in variety there may be an escape from tedium. Controversial questions will be avoided; but from delicate questions there is no escape; and I may best conform to your wish by giving you my own opinions without reservation in the welcome expectation of your criticisms at some early date.

THE NINETEENTH CENTURY AND THE "FIN DE SIÈCLE."

From the year 1899 we shall soon be looking back upon the greatest century medicine has ever known, a century of labour and of results. But our recent vicissitudes, our changes, and our prospects will be sufficiently illustrated by a review of a shorter period, that which is included within the memory of our own generation. It may be asked whether there is anything special in this date to justify a retrospect. "Eadem sunt omnia semper." Dates have for us their significance and in this case the significance lies partly in the expectancy with which the centennial turning-point is looked for by us all. But there is also in our contemporary conditions a special intrinsic excuse for retrospection. Never probably was the future questioned more keenly as to its probable event, for, great as are the wonders we have watched, greater wonders are in reserve. It may be said of this as well as of the last century, that the end seems to be the most exciting part. In the closing days of that century the *dramatis personæ* of medicine were the great physician with his gold-headed cane, the surgeon, great, but of inferior grade to that august person, and the humble apothecary, who would not have ventured to sit down in the presence of these great beings. Gradually, as time went on, the class distinctions became less marked, and now, in the closing years of this century, the physician has lost his cane and his pomp and is only distinguished from his fellow workers in more general subjects in that he is credited with a more ample knowledge of the matters to which he restricts his attention, while the humble apothecary of the early days of the century, who was not paid for his professional advice, but solely for the medicines which he supplied, has given place to the highly accomplished practitioner of medicine and of surgery. He is to be found everywhere through the land, well taught, with a great knowledge of his profession, careful and judicial, wanting but little outside assistance in his work and then only to help to solve some of the difficult or insolvable problems which present themselves in the practice of the profession.

"Fin de siècle" is not an idle term. The whole world is conscious of changes, profound and rapid, and to these none are more keenly alive than ourselves who stand by and watch. They may not have been so stormy as those of a hundred years ago, yet radical, and some of them in a quiet way even subversive. Satirists have described our "fin de siècle" degeneracies. Fortunately degeneracies, like disease itself, which ever renascent life ultimately wears out, are mere passing evils. In the long run change makes for good. Moreover, all the changes have not been revolutionary. There have been evolutionary changes as well. Were I asked to name those of our changes which are most momentous my answer would be—the control of disease and the emancipation of women; the one affecting the entire human race, the other one half of mankind directly and indirectly also the other half. Their influence is already manifest, but they are fraught with expanding results.

One aspect of the emancipation of women belongs strictly to hygiene and under the heading of "physical education" will be dealt with later. The wide subject of their participation in the work of the world since weaving and spinning, once laborious and useful avocations, have been abandoned may detain us for a few minutes. But between the disappearance of the spinning-wheel and the opening up of higher work for women there is a mysterious interruption in the record of their occupation and one begins to wonder what became of the energy which for that interval of years is imperfectly accounted for and how so little mischief to health seems to have arisen from it. A great change has now set in. Higher education is extended even to the lower middle class and, through the Board schools, to the lower class itself. The natural aptitude and pliability of the sex are thus given their opportunity and this has been seized with eagerness. The secret of the wealth of France is that nearly every man and woman contributes to production. Until recent years in this country a large section of our female population had been unemployed; much may therefore be expected from the mobilisation of so great a reserve. Quiet and peaceful studies for the gentler sex; the forum, with its struggles and excitement, for man. This division of labour would apply, with modifications, throughout the scale of professions and employments. In all sciences if their labours are to be divided, and particularly in botany and biology, the domain of fine and patient observations seems to be specially indicated for women. In literature there is in the place of the aimless reading of novels a tempting field now vacant, since in our profession and in others also philology has been discouraged on the plea of over-pressure and one of the richest and most useful of our educational studies is therefore neglected. Molière ridiculed the ladies who took an interest in the study of Greek, but we should now hail their assistance whilst envying their opportunities of combining one of the highest personal pleasures with public advantage.

The accession of women to the ranks of the profession is for us the most important part of this large question. A need has been supplied and a vacancy filled in lines of work for which neither aptitude nor opportunity fit the medical man. A providential coincidence may be traced in this development at a time when the responsibilities of civilising new worlds are, as it were, suddenly cast upon us. Civilisation in its commercial aspect is now carried on at racing speed by steam and electricity. True civilisation of the human beings themselves could be carried out with like rapidity only by the influence and example of women, and who among them can compare in influence and general fitness with the members of our profession under whose enlightened guidance other workers might carry out the beneficent scheme? How different this scheme of civilisation from the former methods which relied upon ardent spirits and the rifle as their chief weapons. India, China, and Africa are the vast fields which will be open to this, the highest of civilising agencies next to that of the missionaries whose labours it would assist. But the number of those fitted and willing to embark upon such arduous enterprises must remain limited. Within our own boundaries, however, plenty of scope may be found for a majority of the workers. The same civilising influence has to be carried into the heart of our cities and into the homes of the people. The enormous wealth of this country is in strong contrast with our pauperism which a long period of State relief has failed to remedy. It is becoming more and more evident that individualism in charity is the only hope for a cure and that the best way to raise the level and provide for the comfort of the lower classes is the

education of the women by women. This is the kind of work which would throw usefulness and interest into thousands of lives imperfectly satisfied by the mere vanities of the hour and could achieve, if organised, incalculable good.

THE CONTRACTION OF THE FIELD OF MEDICAL PRACTICE.

The other great fact around which my remarks will centre is the increasing limitation of disease and the contraction of the field of medical practice. It will be seen that in many cases ailments which hitherto had belonged to the exclusive care of the general practitioner have had a tendency to escape from his undivided control. The causes of this change are various, its ultimate consequences of considerable importance, and to them some attention will be devoted in due course. Other changes no less remarkable have occurred affecting the status, the practice, and the prospects of the profession. They have taken place at the two extremes of the professional ladder and it is significant of the completeness of our representative character of the entire human family that these changes should have been in opposite directions. The same period which has witnessed the undue influence of democratic ruling on some of our members has also thrown lustre upon the entire body by the conferment upon one of us of the highest honour in the state. Changes in the latter direction belong to those which I have termed "evolutionary." The other change we must regard as a "revolutionary" one and therefore subject to revision. It is one which might be regarded as not concerning us, yet there is good ground for our discussing it. Whilst the difficulties of some of our *confrères* have been at their worst, what notice have we taken of them, you and I? Neither the consultant nor the affluent general practitioner has any personal share in these troubles. Nevertheless, they affect the vital interests of the profession by affecting individually its members, those least likely to have the necessary opportunities and power for grappling with the question. Is it not part of our duty at least to take cognisance of their troubles, and when these are realised to help them to find a remedy?

THE GRADUAL DIMINUTION IN THE PREVALENCE OF DISEASE AND ITS CAUSES.

The prevalence of disease has considerably diminished within the memory of the present generation and if its characters have altered in any degree the change has been rather in the direction of attenuation. The origin of this improvement is not far to seek; it is to be found in our improved knowledge of the causes and of the natural history of disease and in the system of repression based upon it, which includes direct methods applicable to some of the infectious diseases and indirect methods for other forms of disease. These two groups will claim our separate consideration.

The parasitic nature of infective disease.—The notion of the parasitic origin of disease dates back to a remote antiquity, but the full proof of its correctness has been delayed until our own times and with it the idea that their spread can be controlled and even arrested. Contagion was a powerful argument for the theory of a living and continuously multiplying *ens morbi*. But where, as in the endemic diseases, a direct transmission failed to be traced the elements were made to bear the blame. The mysterious cropping up of epidemics led support to the theory of spontaneous generation, and, strange to say, even within our own time, spontaneous generation was for a while the burning question until all doubts were finally set at rest by Pasteur. We are now aware that whatever may be the individual channel of communication the cause of each of the infective diseases is a living thing, capable of being destroyed in its nidus, if only we knew how, and of being stopped in its transit.

This result due to modern science and research.—The progressive diminution in the prevalence of some of our most fatal diseases is not merely fortuitous but the direct result of our successful interference. Each of the great victories over disease has been the reward of a long and systematic siege planned in each detail by scientific knowledge. This plan of campaign is in some respects analogous to that of the astronomer in quest of a missing planet. His early calculations seem to have no reference to the object which he seeks, but with fatal precision they ultimately guide the axis of the telescope. It is not for me to depreciate the value of imagination. We owe much to it in science, for without its help some of the most fruitful facts might remain unproductive. This is, indeed, the history of many of our greatest discoveries. They have been rediscovered long after the premature spark of genius had flashed in vain for a world too obtuse and unimaginative.

Specialism in research; bacteriology.—Progress nowadays is subservient to the trained use of instruments of precision and to the faultless accuracy of scientific experiment. Specialism has been much decried. It is a necessary evil of the day, or rather it is the first essential for good work. Nowhere is this more apparent than in the progress of patho logy. Without bacteriology, that most specialised of all our branches of study, none of our latest discoveries could have been made and it is through the concentration of labour upon special lines that its greatest results have been attained. All honour is due to Koch who opened up the road to trustworthy experimentation by his careful elaboration of the technique and his broad generalisations on the principles of bacteriology as a science to be placed within the reach of the ordinary pathologist and within the capabilities of a properly-equipped laboratory. It would be a pleasant task to dwell upon the now extensive list of those diseases which have been traced back to their real causes. Relapsing fever, tuberculosis, leprosy, diphtheria, cholera, tetanus, malaria, actinomycosis, glanders, dysentery, typhoid fever, pyogenic infections, and the plague are no longer mysteries, and they by no means complete the list. Each one of these discoveries has cost the long and assiduous labour of men who had had a complete training in each of the ancillary sciences before starting upon their special investigation. It has been our privilege to live within the day of Pasteur, Lister, Virchow, Cohnheim, Koch, and many others to whom humanity is immediately indebted for our present immunities and to whom was first given the power to make and to unmake disease. We cannot forget, however, that the foundation was laid long ago by such men as John Hunter, Jenner, Baillie, Laennec, Cruveilhier, and Rokitansky; and to these immortal names others too numerous to bring up form an honourable escort.

Diagnosis more scientific.—Etiology loses its use unless disease be recognised. In diagnosis also the most brilliant advances have been worked out in the laboratory. Bacteriology has given us tests for some of the most virulent affections and the other sciences have been drawn into the service of the physician. Diagnosis must always be an art, but it is becoming more and more a science, needing technical knowledge and skill and an increasing supply of instruments of precision. One of our most striking innovations is the employment of scientific aid by the practitioner and the adequate means which have come into existence to supply his requirements. At hospitals all this is provided by the clinical laboratory which is therefore an essential part of their equipment irrespective of any educational object.

The suppression of disease.—It is to Jenner we owe the great idea that a disease may be practically stamped out by a thorough application of some universal protection. I need not weary you with figures, but you are aware that wheresoever efficient vaccination and revaccination are performed the mortality from small-pox is almost *nil* and its incidence is restricted both in numbers and degree. In our own country it survives only by the will of the people. The reduction in the prevalence of the fatal zymotics can be traced to the study of the germs of disease and ultimately to that biological study of the ferments which led the genius of Pasteur to his vast inductions. Preventive inoculation has been practised for cholera, plague, enteric fever, and diphtheria; these diseases, however, are not so prevalent as to warrant universal prophylactic treatment. Vaccination still stands alone as a universally applicable prophylactic and it stands almost exactly where Jenner left it with the single additional improvement of asepsis. It is also to these guiding studies that we owe those immense practical realisations of Lister which have made surgery and which have influenced medicine to its foundation, and it is to them that we are indebted for the fertile teachings of Parkes on hygiene.

The share of hygiene in the prevention of disease.—To hygiene, inspired of bacteriology, are due most of our practical measures of prevention. The suppression of cholera, of relapsing fever, and of typhus fever, the limitation in the spread of the common exanthems, the successful though still fractional results in the limitation of phthisis, and, not least, the improved health and strength of the rising generation,—all this has been the direct fruit of a faithful application of its principles and these results must raise the

subject of public health to the highest place in the service of the State and in the opinion of the profession. The methods of cure and of prophylaxis are of two kinds—direct and indirect. Bacteriology which has done so much in the etiology of disease has also in some instances provided us with its direct cure. But in the line of prevention we have chiefly utilised the indirect methods of hygiene. Hygiene is likewise, in a modified sense, a curative agent, for when associated with medication it lies at the root of some of our methods of cure, as in the case of malaria and syphilis. Again, we are indebted to it for the suppression of the epidemics of puerperal fever and septic peritonitis. This great progress was initiated by Semmelweiss, but the modern life-saving reforms did not become part of practical gynæcology until Lister's great work had shown how the previously unchecked spread of septic infection could be absolutely prevented.

Pyæmia and septicæmia which claimed so many victims are now almost unheard of. Moreover, suppuration itself, with its long delays, its risks and sequelæ, has now ceased to be regarded as part of the process of healing. This simplification in the tale of surgical sufferings is not limited to the traumatic group. I need merely mention abdominal surgery and the rapid relief which it often affords to chronic affections of the stomach, of the bowel, of the kidney, of the liver, and of the ovary.

The share of bacteriology in the cure and prevention of disease.—Bacteriology has in some diseases supplied us both with the prevention and the cure. But in this country the preventive methods have not had the opportunity which unfortunately obtains in the East. The treatment of diphtheria is the most brilliant example of the curative value of the serum of immune animals in which we must admit the existence of some principle, biological or chemical, endowed with the power of neutralising the toxins generated by the bacillus; the immune serum, although it is itself unable to check the growth of the bacillus, still leads in some mysterious way, perhaps by setting free the full contingent of phagocytes previously paralysed by the toxins, to the arrest of that growth. Less successful but not wanting in promise are other forms of serum treatment. The streptococcus serum, the pneumococcus serum, the antituberele serum, and the antitoxin treatment for tetanus and for plague are instances in point. Within quite recent years the immunisation of those likely to be exposed abroad to the infection of such virulent diseases as cholera, plague, and typhoid fever has been systematically practised; but since diphtheria has become amenable to treatment in this country there is less necessity for any protection of this kind.

The respective share of medicine and surgery in the repression of disease.—The contemporary advances of surgery have been the evolution of an art which had previously desired its opportunity now given to surgeons by anæsthesia and antisepsis. As the opportunity was afforded a new surgery grew up under their hands, characterised by skilful manipulation and by infinite ingenuity of device. A tribute is also due to dental surgery, the improved methods of which are of incalculable service in the rational treatment of some lingering ailments. The prime honour in these surgical triumphs is, however, due to that science which elaborated antisepsis, the science which led Jenner to his great results, which subsequently guided Pasteur and, as a crowning benefaction to humanity, inspired Lister and his work. The principles of antisepsis have been worked out on those lines of research which are identical with the laboratory methods carried on in the service of medical questions. In all that preliminary research and experimentation there was very little of surgery in a strict sense, but a great deal of biology and chemistry.

Medicine vindicated.—Whilst the brilliant record of surgery has tended to eclipse everything else the achievements of medicine have been unnoticed or minimised. To place things in their true light the province of surgery would seem to be essentially curative. It may save life or limb, but this is a gain to the individual only. Medicine has done more in prevention. Its dealings with the individual are not always brilliant and its attempts at the cure of disease are too often absolute failures; but it has succeeded in protecting not the individual alone but the community against decimating diseases. The suppression of a single disease, such as typhus fever, small-pox, or cholera, would alone outnumber the surgical total of lives saved. The same opportunity is not afforded by surgical affections, few of which are in any degree communicable. Again, the problems of medicine are slowly worked out. But the fruit of this silent and unremitting work will not suffer in the end through the delay. In reviewing the whole subject we may classify the infectious diseases in three groups: (1) the extinct diseases; (2) the diseases known to be preventable and which might be extinguished by present methods if carried out more stringently; and (3) the diseases of which the spread has been considerably limited, but which we cannot hope to completely suppress. The first group is a small one, but its mortality was great. It comprises in this country only malaria, typhus fever, relapsing fever, cholera, and leprosy. In the second group we can only mention small-pox and hydrophobia. Their suppression might be brought about if the proper means were adopted. The third is the larger group, made up of typhoid fever, diphtheria, scarlet fever, and the minor exanthems, whooping-cough, mumps, and the septic infections. Its record is less brilliant. Persevering efforts at segregation and disinfection may ultimately succeed, but the practical difficulties are great. In the vast field which remains outside the acute infections two of our national diseases, rheumatism and phthisis, stand out prominently, both of them now well in hand, the one thanks to treatment, the other thanks to prevention.

The diminution in the prevalence of phthisis and the measures of prevention.—In phthisis the combination of two infections, the specific bacillus and the organisms of suppuration, explains the need for the perfection of ventilation. There seems to be at last in this country, after a long and regrettable delay, an earnest resolve to provide this remedy. The first advance was made on the strength of general hygiene and in this direction the Factory Act led the way. The Royal Commission on Tuberculosis has reported a diminution of 27·9 per cent. in the period 1891–1895 as compared with that of 1851–1860 for the age-period 0 to 5 years. Great as this reduction is, it represents little more than half the reduction for the age-periods 15 to 20 years and 20 to 25 years. But under the special heading "Tabes Mesenterica" there has been a reduction of only 3·0 per cent. during the interval stated. The report points out that this result, which contrasts with the great diminution of tuberculosis at other ages, has coincided in point of time with the large increase in the consumption of milk. But we are now dealing more and more closely with the agent of the disease in its various modes of dissemination, in the sputum, in food, and in milk. The importance of the purity of the milk-supply has been revealed by the researches of Professor Delépine which are now leading to practical legislation. Since the tuberculin test enables us to detect disease in the cow before it has become otherwise obvious there is no reason why the spread of tubercle by milk should not be efficiently prevented. It should not be forgotten that it was Parkes who first authoritatively brought forward the treatment of the disease by hygienic and preventive methods. The essential of his views as to the management of phthisical patients was that they should be made to breathe an air as pure as the outer air without the danger of catching cold. But, as we are reminded by Dr. Tucker Wise,[1] another Englishman, Dr. George Bodington, in his essay on the Cure of Pulmonary Consumption on Principles Natural, Rational, and Successful (1839) was the pioneer of doctrines which have only gradually attained recognition.

The diminishing prevalence of the minor ailments and of trade diseases.—The increasing healthiness of the community is a notorious feature of the day and we need not review the long list of the general affections. More important are some of the "trade diseases" which modern hygiene has taken into its care and in which a distinct reduction has been brought about, as, for instance, in the destructive lung diseases from inhalation of dust and in the affections due to intoxication by lead, mercury, and phosphorus.

The prospect as regards the further limitation of disease.—With fewer diseases left to suppress are we likely ever to witness again a wholesale reduction similar to that which was the immediate result of the great advances in hygiene and pathology? The answer can hardly be doubtful. The material for future improvement is not likely to be soon exhausted; neither have we yet fully reaped the fruits of hygiene in the direction of prophylaxis and of an increased vital resistance to disease. Moreover, our weapons of attack are steadily improving. Discovery has almost become an

[1] THE LANCET, Nov. 26th, 1898.

organised function and its return of new facts may be expected with the same regularity as the output from a mine. One after another our parasitic diseases must yield to this never halting progress until sporadic instances of our more trivial zymotics come to be regarded with the same eager curiosity which draws a crowd of students round a stray case of typhus fever or of small-pox. Much disease of a non-infectious kind will also be prevented. If this is not too sanguine a forecast there can be but one conclusion—the ratio of instances of disease to the number of the healthy population must steadily diminish.

DISEASE CANNOT ENTIRELY DISAPPEAR.

There is, however, a finality in this encouraging prospect. Although we may in the distant future live healthier lives and die from old age some diseases must remain always. The most virulent diseases are those most easily prevented. But others are incapable of being suppressed and they are apt to be perpetuated by our success in saving the weaker lives.

The periods of life and their medical needs.—Though the decay of old age and the growth of the infant ought to be physiological processes this is almost the exception rather than the rule, and at both extremes of life a variety of affections call for medical assistance. Childhood and youth will remain obnoxious to various infective diseases but also to the ailments incidental to growth and development. The two dentitions, and particularly the onset of puberty, are times when medical advice must always remain essential. Among the minor zymotics which are not segregated measles is still prevalent and too often fatal and our inability to check the progress and the fatal results of whooping-cough is an opprobrium.

The affections of women.—Again, in women the climacteric periods, pregnancy, and child-birth, which should be purely physiological, need watching with special care and gynæcological practice must continue to flourish as it has done in the past.

The degeneracies of middle and of advancing life.—In middle and advancing life the later developments of syphilis will continue to prevail so long as neither the state nor science can cope with this scourge. Many visceral degeneracies are also traceable to infective disease, to wear and tear, to unevenly apportioned labour, and to the thousand risks of life, but most of them to human perversity in turning food and drink into poison. The dietetic diseases of the alimentary, the renal, the cardio-vascular, the nervous, the skeletal, and the cutaneous systems are likely to remain, like gout itself, more prevalent in this than in any other country in proportion with its growing prosperity and in spite of the wiser counsels now prevailing. Cancer abounds; how long will it refuse to yield up its secret and to respond to treatment? As to its alleged increase, some scepticism prevails amongst those best able to judge. But weighty arguments have been adduced in favour of its transmissibility.

Nervous diseases.—Abetted by syphilis and by the marriage of epileptics, these are not unlikely to become more prevalent; at any rate, their diagnosis is now more frequently made. We may distinguish three degrees in nervous disorders. Among the so-called *functional* affections we have hitherto recognised a purely functional group, including hysteria. But there is also a group of "neurastheniæ with degeneration" in which most of the symptoms are functional but in which either syphilitic or simple malnutrition overtakes the nervous substance. I need not dwell upon the remaining group, that of the common forms of central or peripheral *structural* disease. It is evident that the study of the neuron and of its many sufferings will long offer an ample field for pathologists and physicians.

Insanity prevails. Is its frequency increasing? This is not improbable. But, as with cancer, the statistics in the past have not been of a kind such as to enable us to compare the data with scientific accuracy. Insanity is more universally segregated than ever before, and the practitioner is on the whole little troubled with its treatment.

Nerve over-stimulation by drugs; drug diseases.—There is a source of nervous ailments entirely special to this age and the unexpected outcome of our nineteenth-century chemistry and advertising. Intemperance in drugs is becoming more common and it may possibly outstrip the abuse of alcohol and its evil results. The manufacture of new chemical products is supplying the public with endless carbon derivatives of high molecular power and of imperfectly known physiological action. Fortunately many advertised medicines are harmless, but their prolonged use is detrimental if only by delaying the treatment required by the original affection. Others are most dangerous, and their continued indulgence leads to confirmed neuroses or hopeless neurasthenia. Of this we all witness the daily demonstration. It thus comes to pass that as the therapeutic activity of the profession tends to abolish disease that of the public is manufacturing it.

Food diseases and infants' foods.—Whilst the increasing purity of natural foods has reduced our mortality modern ingenuity has been the unintended means of occasionally supplying poison in food. Fortunately ptomaine poisoning is an unusual accident. A much more serious and widespread evil has been the undiscriminating substitution by mothers of condensed milk and manufactured foods for the fresh supply of milk. This neglect of fresh milk and the untutored administration of artificial foods, even of the best kind, without due regard to proportion and to suitability, have been disastrous. To this cause may be attributed the fact that, in spite of modern hygiene, infantile mortality from diarrhœa and marasmus has shown no adequate decrease and sometimes an increase over that noted before these modern inventions.

The danger from the tropics.—Our chief danger in these times of rapid travel and traffic between the Old and the New Worlds is the importation of epidemics of virulent diseases as in the case of cholera of old and recently of influenza with its peculiarly lasting effects; and the plague is our present nightmare. But short of so calamitous an invasion we may expect a growing number of patients returning from the tropics with impaired health. The study of the tropical diseases is therefore most opportune, for not only must they call for a considerable staff of medical advisers in the newly developed centres, but their sequelæ cannot fail to require considerable treatment in this country. Short of the creation of a large and central hospital readily accessible from all the medical schools for the treatment and the study of these affections nothing would seem to be adequate for the fulfilment of our long-neglected imperial responsibilities, for the needs which coming years will multiply, and for the requirements of this vast metropolis viewed as the centre of an immense tropical empire. In conclusion, we may hope that our list of diseases is already complete and even though we might in future generations react differently to microbes which are now innocuous, our position, thanks to hygiene, will be safer than it ever was before.

THE PROFESSION AS IT IS AFFECTED BY THE LIMITATION OF DISEASE.

Although these remnants of disease keep up an excuse for our numbers there is no escape from a conclusion that the extinction of disease which has already occurred has perceptibly lessened our occupation. Those among us of maturer experience may be able to look back upon the field of practice such as they once knew it. Phthisis was enormously more prevalent than now. The zymotics flourished unsegregated, readily gaining entrance into houses and sometimes, like puerperal fever, dogging the medical man's footsteps, but once in possession were difficult to expel till all susceptible material had been used up; even small-pox was not uncommon because less segregated and less guarded against by revaccination; diphtheria and typhoid fever were unchecked in their spread; and the work of destruction by typhus fever was still active among the poor. But in addition those ailments were then rife with which we are still familiar; there certainly was not less of pneumonia or of bronchitis than at the present time, and diarrhœa and English cholera were assuredly more prevalent. Were the same progressive elimination of disease to continue at the same rate a time might be foretold when our ministrations would have become restricted to those two solemn episodes in the existence of our fellow creatures at which it is a wholesome tradition that the profession should be represented—the general practitioner being called in at the birth, the physician at the death; whilst most matters of health were prearranged from head-quarters by the man of hygiene in his laboratory. After its long and faithful stewardship is the profession to become in the distant future a parasite, a superfluous, purely ornamental profession—once active, now defunct? It may be safely predicted that this Utopian change will never be fulfilled.

OUR SCOPE OF USEFULNESS AND OUR OPPORTUNITIES IN THE FUTURE.

It cannot be gainsaid that this limitation of disease is an increasing factor in the pressure which is felt in the ranks of

the profession. Yet we need only look around to see that the medical men are neither fewer than they were nor unemployed. Habit rules supreme over us. In our social life, so persistently conservative, the set relations between employers and employed have a vitality of their own; there is a tendency to utilise agencies which the social system provides for use and the medical man continues to be consulted.

The anxieties of the educated classes.—Two modern developments tend to render him indispensable; both of these are the reflected results of the modern work and progress of science. I refer to the dread of disease and to the desire of prevention.

Leaving aside epidemics of virulent type, such as cholera, typhus fever, and small-pox, which struck terror in the land, the other zymotics, such as scarlet fever, measles, and whooping-cough, were regarded with an indifference bred of familiarity and of an imperfect knowledge of their possible results. But our labours in the suppression of disease have struck a new key. A wholesome dread, in some cases almost amounting to a panic, has seized upon the educated classes. The fear raised by the mention of scarlet fever might be thought immoderate but that it serves an excellent purpose both for the public and for the profession. As a result of this apprehension the medical man's advice is anxiously expected at a stage when formerly homely remedies were thought to be sufficient. The educated classes have also learnt another valuable lesson. They have now been roused to the idea of the preventability of disease and the medical man is often welcomed to conjure away its mere ghost. All round the wise doctrine is gaining ground that advice should be sought before harm has accrued. Although the attitude of the Eastern tribes in face of Kismet never existed among us too much was often left to chance. Nowadays we are approaching more closely to the type of that thoughtfulness for possible evils which prevails in transatlantic England where medical men are so largely consulted. Nor is this limited to the case of the zymotics, which isolation tends to remove from the sphere of private practice. The medical man is largely consulted for discomforts rather than for disease, for alarms rather than for ailments, most of them traceable to the too full enjoyment of the privileges of health and of the good things of this life. Thus, his attention is now drawn by the patient to a different clinical condition and this enlarging display of minor suffering may be one reason why nervous disorders are supposed to be more prevalent. Much of this might be regarded by sterner observers as due to imagination or to exaggerated sensibility. Yet there is a useful side to this minor form of practice. The medical attendant is afforded an opportunity for warning, and by his attention not only to the arrest and prevention of disease but to the improvement of the life and efficiency of the growing generation he does yeoman's service to the individual and to the State. A change, analogous in some respects, has come over the practice among the uneducated, although with results sometimes adverse to the interests of the profession. But the question of the provident system must be reserved for another lecture.

Our widening opportunities.—Enough has been said to show that our occupation is not gone but has shifted only and that our usefulness is as great in preventing as ever it was in treating disease. But in other directions also, including that of public health, important work awaits our highly trained students. A system of almost universal life assurance under State supervision analogous to that which has been largely introduced into Germany does not exist in this country, but if it were to become established among us it would make a considerable addition to professional work in connexion with the examination of candidates. Certificates of sound health and of freedom from contagious diseases and in particular from any tuberculous taint will be more and more in request as the public becomes more educated in matters of hygiene and more sensitive as to the risks of the dissemination of phthisis. For the selection of careers the profession is already largely consulted and the State exacts qualifying medical examinations for the services, but in this direction there is room for much more work than is at present done. The soundness of future generations and the exclusion of heritable disease are duties which may not be mentioned yet lie dormant near the conscience of the profession. The profession is not anxious to invite any responsibility of this sort, even if a tyrannically radical constitution, such as that of a Utopian republic, were wishful to exact it. Self-sacrificing and alert for the public weal in other directions it has on this point remained silent, and we may doubt whether the difficult question as to the discouragement of the marriage of the unfit and the yet more difficult question of the selection of the fittest are likely to be ever submitted to the profession for a practical solution, although there are those who would urge our being more outspoken and attempting even to create a public feeling on the matter. On the important subject of practical Malthusianism which is probably opposed by the conscience of the profession as a false notion politically, socially, and morally, its attitude has also been one of reserve. I believe it has always been in favour of the principles which are consonant with the best interests of humanity and with the greatest sum of happiness and power. Love of offspring is the healthiest sign of a race, and the national strength which is its reward stands revealed in connexion with armaments and now more than ever in connexion with colonising power. More advice will be needed by the State than has been hitherto taken, or at any rate acknowledged by it, in regard to ethnological and colonising questions—a mere sample of the large department of state work in which the profession is destined to take a share.

Compulsory education viewed in its medical aspects not an unmixed boon.—The medical supervision of education is another important question which affords considerable scope for professional activity. Where so many children are congregated and where parents are deprived of all means of selecting their associates a serious onus is incurred by the State and nothing short of the greatest care can cover its responsibilities.

The fatal transmission of scarlet fever and of diphtheria is the worst evil and the question arises whether everything has been done which might have been done to prevent their spread. Are all children who are allowed to return to their schools after an attack of diphtheria sufficiently disinfected in one of the most likely directions? The nasal cavities which are nearest to the seat of affection and in themselves often affected by the disease are too often forgotten as a persistent nidus.

The "head-evil" at schools.—But there is another evil, less serious in the eyes of the lay observer, yet fraught with most serious danger to health and even to life, which for many transforms compulsion into direct injury. It is since the children of the poorest have been forced into the Board Schools in the company of children of respectable and cleanly artisans that vermin have invaded homes carefully kept and the health, or even the life, of many a delicate child has been sacrificed. All this is preventable by insisting that the hair of all children under a certain age attending these schools shall be kept short. To the unthinking this may appear an unpardonable interference with the liberty of the subject, but I need not point out where really lie the crying injustice and the loss of freedom. Thus in matters of bodily health and in connexion with the danger of infection a great deal remains to be done which ought to be regarded as of urgent necessity. The examination of children as to their mental adequacy for the work of the school board schools is at last receiving attention and competent medical observers are now appointed to inquire into this question.

The medical attendance upon the healthy.—Princes have always had their body physicians and men of wealth have imitated the princes and given a social position often with little employment to members of our profession. In the days when Alexander received the ministrations of his faithful physician the rudimental knowledge then current must have provided little occupation for Philip during the conqueror's progress. How great and varied nowadays in personal matters and above all in matters of public health are the responsibilities of the physician to a potentate on his travels; and how much greater the forethought and provision in the case of armies—witness the recent expedition up the Nile—a campaign of hygiene, where one of the most important factors was the bringing on to the field of action, remote, difficult of access, and unhealthy, a large body of men in so efficient a condition that they could fight and conquer. This health-preserving function of the profession, of vital importance in the case of families, is becoming more widely utilised by the intelligent public and the same principle enters as an undeveloped idea into the scheme of the provident system where its further elaboration might perhaps help to correct one of the worst troubles of the profession.

Public health and sanitation.—A large field yet remains to be occupied in connexion with public health. From time to time some catastrophe directs public attention to the work which has silently been carried on. Meanwhile, from all parts of the country we have heard the same report as to the treatment meted out to the most useful man in the district. Finding this want of appreciation on the part of the constituted authorities can we wonder that there should be imperfect knowledge and appreciation elsewhere? Can it be said of every house that it is now medically inspected even once a year? Yet is any responsibility greater? Are all our public institutions adequately and frequently inspected? The Factory Act was the first attempt to deal with a frightful evil, but the same evil in less glaring proportions is still among us and it can hardly be said that the health and lives of thousands of city workers are protected in the way which any physician might indicate. This trenches upon matters which are semi-private and yet where many are employed there is a public duty to perform. Schools are generally provided with their own physicians and with them rests the ability to call in at proper times sanitary assistance. But turning to hospitals, do all of our hospitals possess a regular visiting health officer? It is now proposed at one of our children's hospitals to provide a staff appointment for a medical officer of public health and it is hoped that this example may find imitations. Lastly, even in the official work of local administration what do we find? Disaster and loss of life from the refusal to use the services which were offered as necessary for, or at any rate conducive to, safety. I need not remind you of what occurred at Maidstone.

THE CHANGES WHICH HAVE OCCURRED IN THE CONDITIONS OF PRACTICE.

Although, as I have endeavoured to show, there has been no falling off in the supply of work for the profession as a whole changes have occurred in its distribution, changes also in the conditions of practice, which have led to pressure upon the practitioner. This claims our notice all the more as it may be fairly said that never has labourer been more worthy of his hire. Whilst disease has greatly diminished treatment has grown and is on the increase and the labour of treatment is greater than at any previous time. This is true both from the point of view of the general practitioner and also of the hospital physician or surgeon. The details of treatment are amplified and require more minute care. There is in many cases not only a patient but a nurse to direct, her attendance and skill rendering many measures possible which without her could not be applied, and thus a great deal more is attempted and achieved. The sick room is a busier field and the medical man's call is not a mere formality or wasted in conversation. Hospital physicians and surgeons realise in a special degree this change. A quarter of a century ago it was not considered necessary for them to attend more than two or three times a week and they could then perform their ward duties within a moderate time. During their visit there seemed to be ample leisure for clinical discourse and this doubtless was a charm attaching to conditions of greater ease than now prevail. But the work is now, both for the physician and for the surgeon, so anxious as to render their daily attendance almost indispensable in the interests of the sick.

I am informed by those of mature experience that the conditions of general practice have considerably altered within the memory of living man and particularly within recent years. In the first place the attendances upon invalids are less protracted owing to modern methods and in this the patient is greatly the gainer. But this curtailment is sometimes due to the action of the patient.

The restlessness of patients and specialism.—It is undoubtedly one of the characteristics of the age that there is among us less inclination to bow to authority and on the part of patients or their friends to accept without question or reservation the *dicta* of their once trusted adviser. In the behaviour of those who are compelled to consult us there is to be noticed a restlessness in their desire for the advice of various authorities and a corresponding instability in the relationship between the patient and his medical adviser which is much to the disadvantage of both. There is an old saying that "it is much easier to treat the patient than to treat the patient's friends" who often speak with an assurance about medical matters which is generally proportionate to their ignorance of the subject and which it is particularly difficult to overcome. Friends have been known in their misdirected zeal to interrupt satisfactory progress by suggesting new methods and new advisers, both probably imperfectly suited to benefit the patient. Formerly the family attendant felt secure and from his knowledge of antecedents and of circumstances reaching back for a generation or more was in a position to act with more certainty than a practitioner casually called in. Sad, and in our experience not infrequent, are the cases where a patient who needed only to trust and persevere on the well-considered lines which had been laid down is passed from hand to hand with little chance of benefit and without any chance of carrying out the systematic treatment which is necessary. Much better had he desired his own faithful adviser, as difficulties arose, to seek the help that in his opinion was most likely to be of service. In this way the field of practice has been lessened for the family attendant, often to the detriment of the patients. But other causes have also led to a diminution of his opportunities. The concentration of study upon definite departments of practice has been peculiar to the last decades of this century. It has been an essential condition for progress and has worked beneficially for the profession and the public. But in this matter there is one essential element, that the specialist should continue at the same time to have competent general knowledge. Medical education as it is now understood tends to that happy result. Too often the patient is misled as to his own troubles; and his most obvious symptom, that which attracts his attention, may be but a small part of the case. Nothing will satisfy him till he has had the opinion of someone who has a reputation in reference to the particular symptom which has caught his attention, and this is a process apt to be repeated indefinitely. By the concentration of the specialist's observation upon this prominent symptom the important and essential elements of the case may pass unnoticed—a risk capable of avoidance had his adviser familiar with his conditions been at hand to reveal the less obvious essentials to a complete diagnosis. The patient's advantage lies in a coöperation between his regular medical attendant and his occasional adviser and this also works for their advantage and comfort. The cultivation of this mutual professional intercourse tends to strengthen the bond of professional brotherhood and well might we say, in the words of a great physician, "When doctors differ who shall decide? but when doctors agree who shall venture to differ?" This reminds us that combination is that which we must look to to ease many of our difficulties and it is a remedy which brings with it pleasure as well as strength.

ABSTRACT OF

The Morison Lectures

ON

THE RELATION OF THE NERVOUS SYSTEM TO DISEASE AND DISORDER IN THE VISCERA.

Delivered before the Royal College of Physicians of Edinburgh on Nov. 7th, 9th, and 11th, 1898,

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LECTURE I.

Delivered on Nov. 7th.

THE PATHOLOGY OF VISCERAL INNERVATION.

SIR JOHN TUKE AND FELLOWS,—In selecting so large a subject as the relation of the nervous system to visceral disease and disorder I need scarcely state that I had not the presumption, in view of the audience I should have the honour of addressing, to entertain any intention of an exhaustive treatment of material concerning which many of my hearers would be in a position to be, as some of them possibly have already been, my teachers, but rather to indicate so far as I could guiding points in a subject of

increasing interest and importance; to endeavour, in short, to discover principles—*principia*—those light rays of the dawn, the first perception of which in obscure surroundings is one of the most exalted pleasures of which the human mind is capable. In considering some features in the anatomy and physiology of the visceral nervous system in this place last year the method pursued was centripetal. We examined the subject from the so-called peripheral nerve-endings in organs to their known or surmised origin in the intermediate or central portions of the nervous system. In referring to some points in the pathology or pathological physiology of the same structures I propose following the same course. The pathology of the visceral nerve-ending may be frankly stated to be non-existent, although it may legitimately be assumed to participate in the disintegrative changes which may affect visceral nerve trunks and to which I shall presently refer. We have seen how difficult it is in many cases and under the most favourable circumstances as to freshness of tissue to detect the nerve endings in the viscera anatomically, and when we remember that some of our best histological methods such as the chrome-silver methods are not at present well adapted for pathological work, and that such investigations themselves require an amount of time which is not at the disposal of many general pathologists, it need not surprise us that the pathological changes in the nervous periphery are still in great measure a *terra incognita*. The recent tendency of physiological thought, moreover, to rob the peripheral visceral nervous system of the very modest amount of subordinate automatism claimed for it is calculated to delay active research in this direction.

The disintegrative changes in the visceral nerve trunks may be broadly regarded as of an active and passive kind, the former being due to organic or inorganic poisons and the latter to slow or rapid solutions of continuity by pressure or grosser traumatism. The organic poison playing the part of a morbific agent may be introduced or of home growth—it may be heter-intoxicant or aut-intoxicant. The heter-intoxicant organic poisons most frequently operative are alcohol and the infectious or contagious fevers, especially diphtheria; the aut-intoxicant some form of cacometabolism such as diabetes or gout. The most common inorganic poisons which are of necessity introduced and heter-intoxicant are lead, phosphorus, arsenic, and mercury. The specific effect which these poisons have upon the peripheral nervous system is to cause a proliferation of the connective tissue of the sheaths and of the nerves themselves and thus apparently by the accumulation of adventitious products to disturb the nutrition, impede the conductivity, excite in sensory nerves the sensibility, and ultimately to destroy the continuity of the axis cylinders of the affected structures. This process produces in short an acute tumour which rapidly invades the structure, eliciting in some cases its responsive properties and finally abolishing the latter. Fortunately the cessation or withdrawal of the morbific agent and the reparative power of nerve tissue drawing its life from a higher source serve on the removal of the proliferant and disintegrative blockage to restore the nerve in many cases to its pristine activity or to a state of sufficient functional power.

These well-known features of peripheral neuritis in general have also been found to apply to the visceral nerves, although having to deal in this case with structures differing largely in important anatomical particulars from the somatic series there would appear to be some modification of the process in the internal organs and the whole subject still constitutes one of the fruitful fields of future pathological research. Paul Meyer[1] in his account of one of the most carefully examined cases of diphtheritic paralysis with which I am acquainted found the degenerative changes referred to well marked only in the coronary of all the visceral plexuses. The pulmonary and gastric plexuses were doubtfully implicated and the semilunar ganglion and sympathetic system generally showed no distinctly pathological alterations. He concluded that the fibres involved in the coronary plexus were probably of vagal origin. The clinical visceral phenomena of diphtheritic poisoning, although in their most tragic form frequently associated with cardiac failure, are not, however, as we know, restricted to that organ and it is probable that like changes occur especially in the medullated nerves of other viscera. The severe pain of lead colic which Ross[2] considers neuralgic, as well as the agonising enteralgia associated with specific and old malarial poisoning in some cases, point to an irritative neuritis of sensory visceral fibres. The difficulty of detecting changes in the sympathetic system as a whole is doubtless due, as some have remarked, to the preponderantly non-medullated character of the nerves in question. The sensory nerves in the distant periphery are, however, according to Kölliker, usually medullated,[3] and in these the alterations attendant upon degeneration ought to be capable of detection.

The more gradual pressure exerted upon nerves by morbid growths, while it is conceivable that in some cases it may induce neuritic changes similar to those already referred to, may by the slow obliteration of nerve paths produce a disintegration more allied to the well-known consequences of nerve section in which the disintegration of the medullary sheath is more general and is associated with a minimum of thecal proliferation. Martius in his monograph on tachycardia[4] refers to a case under Hayem's care in which pressure by a sarcomatous tumour in the mediastinum induced atrophy with fatty-granular degeneration of the myelin sheath in both vagi and likewise mentions a case (p. 68) under Billroth's care, published by Kappler,[5] in which that distinguished surgeon excised a portion of the right vagus nerve in a man without permanent effect upon his heart's action, but with persistent paralysis of the laryngeal muscles innervated by the cut nerve, which doubtless exhibited the sectional disintegration of which mention has been made, although this is not expressly stated by Martius. Such processes destroy the activity of visceral nerves and are distinctly destructive, death-dealing, or pathological. The increased demand made upon the functional activity of an organ from breakdown in a system of which it is part, such as the demand made upon the muscular power of the heart when the circulation is from any cause rendered more difficult of maintenance, may, however, be regarded as constructive, life-giving, and physiological, although the organ manifesting compensatory power cannot be regarded as a typically normal one.

It has appeared to me to be permissible and a matter of sufficient interest to again examine a question which has already occupied the attention of some whose names will ever be held in honour by us. I refer to the relation of an hypertrophied organ to its nerve supply. A study of affections of the heart has impressed upon me the importance of this subject and I have chosen the uterus, as the organ manifesting greatest variation in physical bulk, as that best calculated to furnish data for the determination of the question, although, as I shall remark later, both this organ and the heart have intrinsic peculiaritiee not altogether shared by organs which do not possess the same range of rhythmical variation in capacity. William Hunter appears to have been the first to "suspect"[6] that the nerves of the gravid uterus were enlarged in proportion to the vessels. John Hunter[7] disputed this assertion and declared himself an unfaltering Hallerist so far as the nerves were concerned. The matter seems to have been regarded as more or less debateable until the acceptance by a considerable number of leading men of the published results of Robert Lee's work.[8] In more recent gynæcological literature the matter is not referred to very frequently, but Galabin's position may probably be regarded as that of the majority of authorities in that department of medicine. "It is now established," he writes, "that, as might have been expected, growth does take place in the nerves, including the so-called 'ganglion cervicale uteri,' to fit the uterus for the process of labour, in which both reflex action and periodic centric discharge of nervous energy play important parts."[9] The question, it will be gathered, was one not easy of determination and also eminently calculated to be embarrassed by the influence of preconceived notions. Lee asserts that William Hunter never dissected the non-gravid uterus and could not, therefore, have been in a position to institute a comparison. That great man, however, merely expressed a suspicion. The method of Lee, moreover, was open to fallacy. The ganglion cervicale uteri is not an unyielding structure and a good deal of adventitious tissue surrounds

[1] Virchow's Archives, vol. lxxxv., p. 181, et seq.
[2] Diseases of the Nervous System, vol. i., p. 738.
[3] Gewebelehre, Band ii.
[4] Tachycardie, eine Klinische Studie, p. 68, 1895.
[5] Archiv für Heilkunde, 1864, p. 271.
[6] Anatomical Description of the Humid Gravid Uterus, London, 1794, p. 21.
[7] Works, Palmer's Edition, vol. iii., p. 117.
[8] Philosophical Transactions, Part ii., 1842.
[9] A Manual of Midwifery, 1886, p. 97.

extra organic nerve-trunks. Nerves and ganglia may be flattened without notable intrinsic overgrowth.

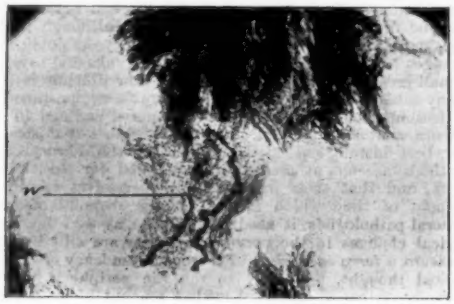
To avoid these sources of fallacy I resolved to examine the nerves of the uterus at various stages of pregnancy by transverse sections of the lower segment where the nerves are largest and by longitudinal section and other means the body of the organ where the nerves naturally are diminished in size and less easy of detection and comparative measurement on transverse section. Sections of the lower segment were stained with hæmatoxylin in the usual way, while the nerves of the upper portion were examined by Sihler's method which I described last year. The animal used was the cat, and as I altogether failed to discover an adult animal which was not more or less pregnant one was kept for twenty-two days after parturition to allow of the uterus regaining its non-pregnant size and was accepted as the type of that condition. The animals were killed before examination by chloroform, hydrocyanic acid, and by drowning after having been anæsthetised. In gauging the size of the nerves at a given level the largest nerve visible was sought as that most easy of detection and least liable to erroneous observation. A large number of sections were made and examined more or less carefully. The general impression conveyed by these to my mind is reproduced in the following micromillimetric measurements actually made:—

——	Cervix.	Level of bicornu.	Body.
	Micromillimetres.	Micromillimetres.	Micromillimetres.
Advanced pregnancy: fœtus nearly fully grown	8 to 10	5 to 10	6
Early pregnancy: fœtus measured 1·5 millimetres	8 to 12	10 to 12	3 to 4
Twenty-two days post partum	7 to 10	5 to 7	5

As I have stated only the largest measurements were taken. Below these every size of nerve down to the terminal fibrils and penultimate plexuses were observed and to peculiarities of the latter I shall have to return when discussing visceral pain in the next lecture. The present observations on the relation of size of nerve to hypertrophied organ were indeed made *en passant*, the research being directed more to the elucidation of the local causes of visceral pain with a view to the discussion of the etiology of angina pectoris. In estimating the value of the measurements given three questions have to be answered: (1) were the animals the same size? (2) were all the measurements taken from uterine nerves proper? and (3) do the comparative sizes given in the three animals represent corresponding levels? The first and second of these questions I answer in the affirmative. The third requires some explanation as to the diameter of the nerve from the body of the uterus post partum. The body of the uterus in this condition being smaller than in early pregnancy and much smaller than in advanced pregnancy the whole of it was sliced with Cathcart's freezing microtome prior to staining, and it is possible that the nerve of comparatively large diameter noted as the largest seen in this case may have been obtained from the body of the uterus at rather a lower level than the mid-body—the portion examined in the other cases—and thus be somewhat of an over-estimate for the non-pregnant state. An examination, however, of the diameter of nerves in the cervical portion of the uterus leads to the conclusion that while there is practically no difference between the size of the uterine nerves in advanced and early pregnancy there is a certain increase of size to be noted in these conditions as compared with those in the quiescent uterus twenty-two days post partum, and it may therefore be validly assumed that what is true of one part of the organ is true also of the whole and that some increase in the *apparent* size of the nerves in the gravid as compared with the non-gravid uterus may be conceded. The increase is, however, I believe, apparent rather than real, for a closer examination of the individual fibres constituting the nerve trunks reveals no increase in them either in size or numbers. What may, however, be observed is a somewhat greater pliability and looseness or succulence of texture, the bearing of which upon the remarkable condition I shall presently refer to will be apparent. It may therefore be safely asserted that if any increase takes place in the size of the nerve of the gravid uterus it is in no sense proportionate to that which is by common consent met with in the case of the vessels, muscular fibre, and connective tissue constituting the organ.

Lee states that John Hunter left no preparations of the uterine nerves in support of his assertion that there is no increase in the size of the nerves of the gravid uterus. That matchless observer, however, left a positive assertion of an

FIG. 1.



N marks nerve-loop from the body of the uterus of a cat in early pregnancy.

observable condition and it requires some boldness to call in question the accuracy of his observation. Personally, I respectfully tender my adhesion with the qualifications already stated to John Hunter's statement as regards the condition of these nerves in pregnancy. But the difference between a statement of facts in an observable condition and the expression of an opinion, however positively made, which is not covered by those facts is very considerable. Science knows no *ex cathedrâ* utterances and the humblest who can draw from the bosom of

FIG. 2.

N marks nerve from the body of the uterus of a cat in advanced pregnancy.

nature an indisputable fact which contravenes the opinion of the most exalted not based upon such adduces a more mighty argument for his position than volumes of hypotheses backed by the sign manual of sacrosanct authority. John Hunter said that the uterus might be fifty times as large in pregnancy as in non-pregnancy; that all the textures of the organ are increased in size except the nerves; and that therefore the nerves have nothing to do with the action of the enormously overgrown organ. Hunter was not much of a casuist or he might have been more careful on this occasion. If, however,

the uterus be fifty times as large when gravid as when not gravid, and the muscular fibres of the organ can be shown to be innervated like all other muscular tissue somatic and splanchnic, what becomes of the innervation of the uterine muscle most distant from the point of entrance of the nerves at the cervix if these nerves do not enlarge? Do they snap in the stretching? To ask the question is to insult nature. Is there, then, any provision for the adequate innervation of the gravid uterus without an anatomical increase in the size of the nerves in that state? There is, and a provision which to my mind is one of the most remarkable as it is one of the most simple conceivable. The simple and sufficient expedient adopted by nature under the conditions discussed is one which was unknown to me when I undertook this investigation and I am not aware that it has been described before. Tortuosity in the blood-vessels of the uterus from their notable increase in size is more apparent in the gravid than in the non-gravid organ. Tortuosity of the uterine nerves is, I believe, inversely as the size of the organ. Tortuosity of nerve-trunks may indeed be seen in the fully gravid uterus, but in none of the sections of the organ at term which I have examined have I observed by any means the same degree of tortuosity and coiling as in the nerves of the uterus in early pregnancy or post partum. This coiling may, indeed, be such (as in one specimen which I show) as to suggest the figurative parallel of paying out a coil of rope to an object which is increasing its distance from a point of attachment. In the facts I have mentioned and the specimens I show I believe I have grounds for maintaining that it is by this grandly simple expedient that the nerve supply of an organ intended to vary in size is adapted to these varying circumstances. The apparent increase in the size of the nerves, their more open texture, their more succulent appearance, are but adjuvant conditions which promote the paying-out of the nerve-rope to the lengthening organ. When we come to examine the relation of the cardiac nerves to angina pectoris in the next lecture the bearing of these facts upon a wider range of physical conditions will be more apparent. The nerve-coil is, however, but an emphasising of that wavy elasticity which the longitudinal section of any nerve with a considerable range of extensibility—such, for example, as the pneumogastric—will show.

The conclusions, therefore, to be drawn from the facts I have stated as regards the anatomical relation of the nervous system in a physiologically hypertrophied organ possessing a considerable range of normal variation is that there is no essential increase in the proportions of such nerves to such organ, but that anatomical and physiological changes occur in the nerves which enable them to adapt themselves to the organ they supply and in a measure control. As Galabin states in the passage I have quoted "both reflex action and periodic centric discharge of nervous energy play important parts" in the process of labour. With essentially centric conditions I am not at present concerned. My present purpose is to suggest that one of the factors in evoking reflex action at term and in inducing those contractions associated with pain referred to the active viscus, under these circumstances, is the fact of the enlarged organ having reached at a certain period the full tether of its intrinsic nervous system. The rope has been paid out to its full convenient stretch and the note is sounded for a return of the organ to more moderate dimensions. There is a crudeness about this suggestion, I admit, which at first repels one, but having carefully thought the matter over, and without wishing to impute an unduly prominent *rôle* to this factor in the production of labour I can come to no other conclusion. The predisposition to centric discharge, as Galabin calls it, is doubtless induced *pari passu* with the changes I have indicated, but I do not think that the factor named can be eliminated.

Robert Lee[10] maintained the same thesis in connexion with the nerves of the heart when that organ is hypertrophied which he did in the case of the gravid uterus. His words are: "That the ganglia and nerves of the heart enlarge like those of the gravid uterus when the walls of the ventricles are affected with hypertrophy." Cloetta, quoted by Walshe,[11] partly agreed with Lee, but could not decide whether the apparent increase in the size of the nerves was due to an increase in the connective tissue sheath or to actual increase in the nerve fibres. These assertions have not so far as I know stood the test of time, although I am unaware of any systematic examination of the question. In view of the facts I have stated in connexion with the innervation of the gravid uterus and which are opposed in great measure to Lee's conclusions I should, *a priori*, dispute the correctness of his views as regards the innervation of the enlarged heart. There is, as I shall endeavour to point out in my next lecture, a special provision in the nervous anatomy of the heart, the same in principle as that met with in the uterus and to which I have referred, for allowing the nerves of that organ, which varies so much in size during action, to adapt themselves to such variation. This provision is less marked in organs such as the spleen and the kidney with a smaller range of normal variation in size.

Leaving nerve trunks I pass now to some mention of the pathology of the ganglion and the ganglion cell in the visceral nervous system. Death, that universal law which organised matter must obey and which has been suitably defined in scientific language on the tomb of Bacon at St. Albans as the command "Let compounds be dissolved," induces changes in such compounds, changes observable and yet not truly pathological, as we usually understand the term, but which may be mistaken for such. The criteria for their satisfactory discrimination from pathological changes cannot yet be said to have been determined. To grow old is in a manner partially to die; to be enfeebled is likewise a retrograde change. Advance in life, however, is not pathological; enfeeblement is, and yet changes may be met with post mortem in the cells of old and young alike which are at times difficult to distinguish the one from the other. This confusion between dead young and old tissue is not, however, I think frequently possible. Collateral conditions serve to distinguish the one infallibly from the other. The features of senile degeneration in ganglion cells mentioned in one of the most recent and reliable works on diseases of the nervous system[12] are a certain diminution in size and number of cells and well-marked pigmentation, such pigmentation not being associated with notable disorder of function. When changes normal to senility are found in youthful cells it is highly probable that the latter have been rendered functionally old by disease and that the change must be regarded as pathological.

In writing of the changes met with in the cardiac ganglia Ott[13] states that two kinds of pathological change occur in these—the one progressive and consisting of hyperplasia of connective tissue and the other retrogressive and consisting of parenchymatous degeneration of new cells. The former he met with in congestion and hypertrophy of the heart; the latter he found associated with qualitative blood changes such as uræmia and pyæmia. The proliferation of connective tissue in a visceral sympathetic ganglion may, however, be of a more active type, as was shown by Lancereaux's case[14] which so long reigned alone as an instance of cardiac neural pathology. In this case the cardiac plexus participated in an extremely rich abnormal vascularisation at the root of the aorta and showed microscopically a round-celled infiltration between the nerve fibres of the ganglion which compressed the former. These conditions were associated with angina pectoris. But the progressive and retrogressive changes may be met with in the same case. A ganglionic structure may participate in a general interstitial proliferation such as that met with in granular kidney. Although it may be difficult to decide whether the parenchymatous change in the nerve cell be due to such interstitial hyperplasia, or both it and the latter be the expression of a blood dyscrasia causal of each, the influence of interstitial cirrhosis in interfering with the due nutrition of a nerve centre cannot, I think, be altogether excluded and may even be causal in some measure of the changes in question. Such changes need not, however, place the cell out of action, although it is highly probable that the functional activity of such a cell is subnormal. This combination was well shown in a posterior root ganglion which I examined last year and which I obtained from Dr. Risien Russell, pathologist to the National Hospital for the Paralysed and Epileptic, Queen-square. The case had been under the care of Dr. Hughlings Jackson, to whom I am

[10] History of the Discoveries of the Circulation of the Blood and of the Ganglia and Nerves and of the Action of the Heart, 1865, p. 28.
[11] Diseases of the Heart, fourth edition, p. 281.
[12] Leyden and Goldscheider's Erkrangungen des Rückenmarks, Wien, 1897, p. 102.
[13] Prager Zeitschrift für Heilkunde, vol. ix., No. 45, and quoted by Balint, Deutsche Medicinische Wochenschrift, No. 1, 1892, p. 2.
[14] Gazette Médicale de Paris, 1864, p. 432.

indebted for permission to refer to it on this occasion. The necropsy on this patient, a male, sixty-five years of age, took place six hours after death. The nervous system revealed nothing abnormal beyond an atrophic state of the convolutions of the hemispheres generally and the central vessels were atheromatous. The kidneys presented the typical contracted granular appearance associated with the changes of interstitial nephritis and the heart the corresponding condition of concentric hypertrophy. A posterior root ganglion which I examined by various methods showed well-marked interstitial hyperplasia like that characteristic of the general state in which the body was, and parenchymatous change in a large number of the nerve cells. This change would, I presume, be termed pigmentary, but as the degenerated portion stained very darkly after exposure to bichromate of potash, osmic acid, and nitrate of silver, which had no effect upon the rest of the cell substance, a fatty degenerative change would appear to have been present. I show lantern slides from the preparations in illustration of these points. To compare with these atrophic and proliferant conditions I also show the state of a posterior root ganglion from the body of a female, eighteen years of age, who died in Queen-square Hospital from double pneumonia due to mastoid disease without central nervous complications. The case was under the care of Sir William Gowers and the ganglion examined was given to me by Dr. Risien Russell. The differences between the old degenerate ganglion associated with arterio-sclerosis and general interstitial hyperplasia and the normal organ of a young person who practically died an accidental death are very striking. The large, better differentiated cells with little parenchymatous and no interstitial change in the young and normal ganglion are easily distinguishable from the ganglionic cirrhosis and degenerated cells of the decrepit old man.

It is only necessary to refer to two other conditions of the posterior root ganglion, those, namely, associated with herpes zoster and dorsal tabes. Atrophy and induration have been found in the posterior root ganglia related to territories of skin affected by herpes zoster, the agonising pain in many cases of which affection is so well recognised a clinical fact, while in dorsal tabes an inflammatory process, chiefly affecting the proximal and central portions of the posterior root ganglion and the posterior root itself, has of recent years attracted growing interest and attention. These changes are described by Leyden and Goldscheider as atrophic[15] and affecting the nerve fibres. The connective tissue is also said to be increased, but the question of a change in the nerve cells is left undecided. The admitted alterations are, however, of interest in connexion with the sensory disorders of the viscera with which we shall be engaged in the next lecture, and particularly with the visceral crises of tabes which have so pernicious an effect upon the course of the disease. Our knowledge of the course of visceral fibres in the central nervous system is still so limited that a discussion of the pathological lesions associated with general trophic degradation would not at present be useful. It is a very remarkable fact how little most central lesions outside the bulbar area are accompanied by such general atrophy. The two factors in chronic diseases of the central nervous system which appear to bring about malnutrition most rapidly are pain and mental anxiety, and the latter may be regarded as pain in the intellectorium just as the condition we conventionally call pain is a reaction in the sensorium—to use old terms largely and perhaps prematurely discarded. Inasmuch as physical degeneration will be brought about by these conditions in the absence of central lesion we cannot well gauge the influence of the latter, but it is rational to think that their presence hastens and emphasises the malign influence of pain and mental distress.

It will thus be observed how rudimentary our knowledge of the pathology of the visceral nervous system still is. There are, however, already hopeful evidences of light-giving work in this obscure field and I cannot close this lecture without a passing reference to those histo-physiological investigations which have brought to light interesting facts as regards the behaviour of nerve cells cut adrift from peripheral organs with which they are normally associated. The changes, although purely physiological, appear to point to a method of research which may lead to knowledge of pathological change in cells whose touch of the organs they innervate may be loosened by disease general and local. Although I have myself undertaken some work on these lines my work is still incomplete and for the information on which my few present remarks are based I am indebted in great measure to Van Gehuchten's exhaustive paper on the Fine Anatomy of the Nerve-cell in "La Cellule,"[16] in which also full references to the very interesting literature of the subject will be found. It would seem to be essential to the maintenance of healthy structure in the nerve cell not only that it should itself be undamaged but that the organ its axis cylinder more or less directly innervates should also be in a condition healthily to exercise its function. This is surely a very suggestive fact as regards the relation of body and mind, the subjective recognition of which is at least as old as Juvenal who associated the sound mind with the healthy body. The functional unit, in short, as we shall argue again, is not one but triune—peripheral organic cell, central nerve cell, blood. Our knowledge of the general effect upon the central nervous system of the severance of the periphery from the centre is as old as the researches of Bérard, Vulpian, and Dickenson (1829–66), quoted by Leyden and Goldscheider,[17] who studied the effect upon the cord of the amputation of limbs; but our more exact knowledge of details in the process is much more recent and due in great measure to the method of staining nerve cells introduced by Nissl and which has already been fruitfully applied to the examination of normal and abnormal conditions of cells in the central cortex. Van Gehuchten's observations were made upon the hypoglossal and pneumogastric nerves of the rabbit, the latter nerve being divided below the plexiform ganglion. The changes noted in the medullary nuclei of both nerves were—(1) a chromatolysis during which the chromatic granules in the cell protoplasm were dispersed towards the periphery of the cell, the protoplasm staining soon afterwards a uniform blue; (2) an eccentric displacement of the nucleus which might proceed to extrusion and the consequent sacrifice of the cell; (3) in the case of motor cells a gradual recovery at least for the time to their original chromatic or "pyknomorphic" condition was noted, while the sensory cells in great numbers disappeared absolutely. More recently Goldscheider and Flatau[18] have studied changes induced in cells by various poisons of an organic and inorganic nature. Their results with the use of tetanus toxin are particularly interesting, as also the effects they have observed to follow from the exposure of animals to high temperatures. There appears to be a very noticeable enlargement of the cell nucleus in tetanus and a complete chromatolysis seems to be induced by excessive temperatures. This sketch of the changes, pathological and experimental, met with in the visceral innervation shows how little is as yet positively known of the alterations which underlie neuro-visceral disorders; but it likewise declares plainly that the night is past and that daylight more or less clear cannot be very long delayed.

[15] Op. cit., p. 512.

[16] Tome xiii., 2nd fascicule, p. 315, et seq.

[17] Op. cit., p. 89.

[18] Normale und Pathologische Anatomie der Nervenzellen auf Grund der neueren Forschungen. Berlin, 1898.

THE SPECIFIC ORGANISM OF VACCINIA.

BY A. F. STANLEY KENT, M.A. OXON.

IN a former issue of THE LANCET[1] I gave some account of certain experiments upon the nature and cultivation of the virus of vaccinia. It is the object of the present paper to give a further account of these experiments and to describe the results subsequently obtained.

To recapitulate very shortly the main points of the former researches, it will perhaps be remembered that the starting point[2] was the histological examination of sections of the vaccine vesicle at various stages of its development, the significant fact elicited from such examination being the presence in the tissues of an organism differing in morphological characters, in staining reactions, and in distribution from the organisms of the surface and from the foreign organisms ordinarily associated with vaccinia. It is of course a by no means difficult task to isolate from a material like vaccine lymph—which swarms with micro-organisms of various species—and to cultivate, some one or other of the

[1] THE LANCET, May 21st, 1898.

[2] Brit. Med. Jour., Sept. 22nd, 1894.

non-essential germs; indeed in this way much labour has been expended and much time wasted. And yet not entirely wasted, for though failing to accomplish the primary object of determining the nature of the actual contagium such researches have cleared the ground and have facilitated the work of subsequent investigators.

It is nevertheless somewhat remarkable that claims to be the specific virus of vaccinia should have been put forward in the case of several organisms whose sole title to the honour appears to be that they occur in vaccine lymph. How little this latter fact is in their favour will be appreciated when the long list of bacteria having similar claims is called to mind. It is by no means impossible that there may have been some justice in the contention put forward that certain of these organisms played an important *rôle* in the processes of vaccinia; nevertheless, it was impossible that the real virus of the disease—the organism in whose absence vaccinia could not occur—should be discovered and its identity put beyond question until the actual direct proof by cultivation and inoculation could be brought forward, and in every case until recently the direct proof has been wanting. There appeared, however, to be some facts in favour of the organism which I discovered in the tissues of the vaccine vesicle in 1894[3] being regarded as possessing claims perhaps somewhat higher than those of the bacteria previously described to at all events a tentative recognition. The new bacillus was, in the first place, exceedingly minute, measuring a bare micron in length; it appeared to occur, as a rule, in pairs joined so as to form dumb-bells, not true diplococci, the individuals being distinctly, though only slightly, greater in length than in breadth. Further, the staining reactions were not such as are usually found in the case of ordinary saprophytic bacteria. Most important of all, however, was the fact that these minute bacilli occurred not on the surface or, so far as could be ascertained, amongst the crowds of foreign organisms in the most superficial parts of the vesicle, but deeply seated, in large numbers, and in practically pure culture in their special habitat beneath the line of incision. It is natural to expect to find the organism upon which a disease depends in the tissues of the affected animal, and the fact that this special organism not only conformed to this requirement, but was, in addition, apparently the only one of which this was true, rendered a thorough investigation of its nature desirable.

Regarding its occurrence in the tissues it will perhaps be recollected that in 1894[4] I showed microscopical specimens in which by a special method of staining its presence had been demonstrated. It was also pointed out that it closely resembled a certain organism which by following special methods had been demonstrated in vaccine lymph by Dr. Copeman and myself.[5] But the bacillus in the lymph appeared to occur especially in early lymph and, in fact, its presence in lymph taken from mature vesicles seemed doubtful. In the sections of the vesicles, on the other hand, the special organisms could always be shown to occur even up to quite a late stage of the disease, and their numbers were very great. To explain their apparent disappearance from mature lymph which nevertheless maintained its power as vaccine it was suggested that as time went on spores were formed and it was further suggested that these spores formed the material which conveyed the disease when the lymph was preserved dry on points. That this may occur is, I think, probable. Indeed, the appearances presented by the organism when stained in certain ways strongly suggests such an explanation. At the same time it is not improbable that the bacilli themselves occur in the lymph up to quite a late stage in the maturation of the vesicle. For if instead of collecting lymph in the usual manner by applying pressure forceps, removing the crust, and allowing clear liquid to exude a slightly different method is adopted and the pressure forceps being dispensed with the crust together with as much of the underlying tissue as possible is removed by means of a Volkmann's spoon, the lymph which exudes from the base of the vesicle will be found even in late stages to contain the specific organsm in large numbers. I believe the explanation to be that the bacilli occur in the lymph and in the superficial parts of the vesicle early in the disease but that later their distribution is altered and they lie more deeply in the tissues.

As regards the existence of spores in the diplo-bacillus it may be noted that a very large number of preparations has been made and new methods have been devised in the hope of demonstrating their presence, since the general behaviour of the lymph seems to be best explained on the assumption that they do actually exist. Up to the present, however, I have only occasionally been able to show certain spherical exceedingly minute bodies which so far as it has been possible to investigate them appear to be of the nature of spores, but whose minute size renders any certain knowledge of their nature exceedingly difficult to obtain, at all events with the instruments which I have at my disposal.

Regarding the bacilli themselves some additional information has been obtained. As is well known the foreign organisms which occur in vaccine lymph as ordinarily collected, and which have nothing to do with the specific properties of the lymph, exist for the most part on the surface, in the crust, and in the superficial parts of the vesicle. *The foreign organisms do not occur in the deeper parts of the vesicle.* Indeed, it is possible to obtain a very nearly pure culture of the specific organism by removing by means of sterilised instruments the superficial parts and subsequently taking material from the base of the vesicle. Many of the organisms so obtained will be found to be contained in cells and to correspond to those more deeply-lying individuals which I have described in sections. So completely have they taken possession of these deeper regions that it is no unusual thing in examining a series of preparations made in the manner which I have indicated to find cover after cover showing no organisms whatever except the diplobacillus vacciniæ, whilst that occurs in large numbers.

So far, then, as its distribution in the tissues has been investigated, the results would seem to indicate that the organism which I have described deserves to be placed upon a somewhat different footing from those which have been previously isolated from vaccine-lymph. With regard to its specific nature, however, it was of course impossible to come to any definite conclusion in the absence of any method of preparing pure cultures, and my efforts were in consequence directed towards elaborating such a method. How at last I attained success in my endeavours has been described in a former paper,[6] and since that paper was published a series of experiments has been carried out with the object of finding some new culture medium or some modification of the old which would allow a more rapid growth to take place than was the case with the mixtures at first employed. In my original culture medium of albumin and glycerine it was found that the best proportion of glycerine lay somewhere between 15 per cent. and 20 per cent. Considerable care has to be exercised in the adjustment of the proportion of this constituent, as on the one hand if the quantity present is insufficient the growth of foreign organisms is not checked, whilst on the other the presence of an excess of glycerine appears to exert a prejudicial effect upon the development of the vaccine virus.

The proportion of albumin in the mixture is also not without importance, for unless it is present in fair amount the glycerine appears to exert more than its usual power and so prevents a satisfactory growth being obtained. The exact proportions which I am at present employing are: albumin, 34 per cent.; glycerine, 16 per cent.; and sterilised water, 50 per cent. As regards this last ingredient I at first used distilled water, but subsequent experience proved that somewhat better results appeared to follow the employment of ordinary tap water. The exact nature of the salts present in this and their quantity I have not determined, but they seem to be rather beneficial than the reverse.

Another material which I have used as a culture medium with some success is milk—either whole milk or the liquid obtained by the filtration of whole milk through a Berkefeld filter—either mixed with a suitable proportion of glycerine or alone. The best proportion of glycerine to use appears to be about 33 per cent., and in such a medium I have obtained an active culture in somewhat less time than is required in the case of the glycerine and albumin medium. The milk media offer the further advantage that they can be sterilised by heat in the ordinary way without destroying their power of supporting the growth of the diplo-bacillus. I am at present making experiments with various other media, notably with the blood-serum of various animals, both mixed with glycerine and unmixed; and a material which has been provisionally tested with encouraging results consists of vaccine vesicle pulp freed from all organisms by the prolonged

[3] Loc. cit. [4] Loc. cit. [5] Loc. cit.

[6] THE LANCET, May 21st, 1898.

action of strong glycerine at a suitable temperature until plate cultivations show it to be free from foreign organisms and inoculation upon susceptible animals shows it to be free from the specific virus of vaccinia. This material when absolutely free from all organic life is diluted with sterile water to the required percentage of glycerine and used as a culture medium in the ordinary manner.

Another factor of great importance in obtaining pure cultures of the diplobacillus is the temperature at which the tubes are kept. In my earlier experiments the culture tubes were allowed to lie in the incubator at 37° C., but it was soon found that better results were obtained if a somewhat lower temperature were employed. It appears that even at 37° C. the glycerine when present in so low a percentage as 15 per cent. or 20 per cent. exerts an injurious action upon the virus and better results can be obtained by keeping the tubes at a temperature of 15° to 21° C., though a longer period of time will be found to elapse before distinct traces of growth appear.

The staining of the diplo-bacillus is a somewhat difficult matter and very slight causes seem to be sufficient to determine in any given instance whether the organisms will stain by a special process or will not. More especially any overheating in the flaming of the cover-glass preparations seems to be fatal to a good result, and often in such slides the diplobacillus may be seen to be quite unstained, whilst other bacteria if they happen to be present may have taken the stain strongly. Löffler's alkaline methylene blue has in many instances given me satisfactory results, but it must be allowed to act for a long time. Curiously enough in preparations stained with this dye the organisms are sometimes stained red—not a faint pink that might be attributed to the effect of contrast, but a brilliant saffranin red which is obviously due to some special reaction between the organism and the dye. I have seen similar phenomena before—some years ago in the case of an entirely different organism—but there a special part of the bacillus, possibly a spore, was stained brilliantly red, whilst the rest of its body was stained blue. At the time I attributed the difference in colouration to some difference in chemical constitution between the main mass of the bacillus and the spore-like body. In a different category must be placed the instances in which in Gram-stained preparations a difference in tint is discovered. Here we are dealing in the first place not with a pure blue but with a violet and in addition the decolourisation process may be held responsible for some variation in the result. Yet it is curious even under such conditions to observe that occasionally one member of a diplococcus may be violet whilst the other is pure red. In the case of methylene blue the change from blue to red is due to a process of oxidation and oxidising agents when added to a solution of the dye turn it at once to a brilliant red. Some such process would seem to take place also in the instance under consideration.

For staining sections I have found a modification of Gram's method the most satisfactory, used after the tissue has been hardened in absolute alcohol or in a mixture of Müller's fluid and a saturated solution of mercuric chloride in 1 per cent. acetic acid. Either of these hardening agents gives good results and the distribution of the specific organism, especially in the deeper layers, is well shown. For cover-glass films of lymph and cultures better results have recently been obtained by the employment of carbol fuchsin after the ground has been cleared in 20 per cent. acetic acid in the usual manner. If the fuchsin be allowed to act for from 15 to 20 minutes and the covers be then subjected to a somewhat prolonged washing in water preparations may be obtained which, though somewhat dirty in appearance and by no means "pretty" specimens, yet show the diplobacillus intensely stained and in parts quite free from granular material or stained ground. Even a short sojourn in alcohol removes the dye very completely from the organism.

Appearances presented by the cultures.—If, then, a culture medium is to be prepared it should contain about 34 per cent. of albumin and 16 per cent. of pure glycerine and the precautions taken in its preparation should be sufficient to ensure the absence of all, or nearly all, foreign organisms; or in lieu of such stringent precautions the albumin and glycerine may be mixed together in a pure state and kept until such time as plate cultivations show that all organisms have been killed out, being subsequently diluted with sterile water to the required strength. The inoculation of the culture medium should be effected by the employment of vaccine lymph (preferably taken from the base of a vesicle after the superficial parts have been removed by sterile instruments) which has been kept in contact with glycerine until on testing in plate cultivations foreign organisms are shown to be absent and on testing by inoculation upon susceptible animals the lymph is proved to be active. The quantity of seeding material used in my experiments has varied. In some recent experiments the proportion of lymph to culture medium has been 1 in 820,000, and the cultures, after having been established for little more than a week, have given positive results when inoculated upon animals. Usually, however, in cultures so prepared no visible change occurs during the first few days, especially if the tubes be kept at a low temperature. Afterwards the fluid is observed to lose its brightness and gradually a faint opalescence will develop until in a week or ten days the whole liquid will be distinctly turbid. At the same time a certain amount of a flocculent material will be separated and will fall to the bottom of the tube. In addition, examination will reveal the presence of a delicate white film on the sides of the tube and closely adherent to it. In this connexion it is interesting to note the fact, often observed in practice, that vaccine lymph when taken from the calf and sealed up in capillary tubes in the usual manner is by no means certain in its action if used for the vaccination of children within a short time of its collection, whilst if it be kept for some time its virulence is restored and if then used it is found to give perfect and uniform results. This fact has been explained by the assumed adherence of the particulate carriers of the disease to the sides of the tube and their later separation from it.

In the case of cultures made upon the whole milk media described the presence of the fat would of course interfere with the observation of the above changes. It will, however, be noticed that in such cultures the milk tends to lose its opacity and to become yellower, changes best seen when the fluid is examined in thin layers and by transmitted light. In addition a certain small amount of a chalky-looking deposit falls to the bottom of the tube. Plate cultivations upon agar and gelatin established from such culture-tubes as those described yield negative results—that is to say, after incubation at 37° C. and 21° C. respectively for a week the plates will show no points of growth and thus the presence of foreign organisms is excluded.

Inoculation of the cultures upon animals.—If, however, the material be used for the inoculation of susceptible animals such inoculation will in successful cases result in the production of vesicles indistinguishable from those produced in the ordinary course by vaccination with current lymph. Moreover, having once obtained a growth of the diplobacillus it is by no means difficult, though on account of the slowness of its growth it is a somewhat lengthy process, to establish from it subcultures which when used in their turn for the inoculation of animals give similar results. One difference in the action of current lymph on the one hand and of these early (ten day old) cultures on the other which has been commonly observed is that whilst with the former 100 insertions will, as a rule, produce 100 vesicles, with the latter a like number of insertions will produce perhaps only half as many. As time goes on, however, the insertion success improves considerably, and with cultures of three weeks old which in the early days failed to produce any result when used for inoculation I have frequently obtained exceedingly satisfactory results, the success ratio sometimes rising as high as 100 per cent. Further keeping for a period of from eight to ten weeks often results in a gradual decline in activity and sometimes at the end of this time formerly active cultures are found to be inert. This decline in activity seems to depend very much upon the temperature at which the tubes have been kept and it may be possible to preserve virulent cultures for considerable periods by adopting suitable precautions to protect them from excessive heat. The failure to obtain a higher insertion success in the case of early cultures I attribute principally to the difficulty which exists in so proportioning the constituents of the culture medium that on the one hand foreign germs may be prevented from growing and yet that the diplobacillus may thrive, for it is undoubtedly the case that glycerine, whilst exerting a less deleterious effect upon the vaccine virus than upon other organisms, yet when present in the higher percentages does exert such an effect upon it to an appreciable degree and exerts it very markedly at temperatures only slightly raised above that of the air. I hope to go more

fully into this subject on a future occasion. At present I wish merely to point out that it is a matter which has to be taken into account in the elaboration of a method of cultivation.

In the experimental inoculation of animals with the cultures of the vaccine virus described above the results produced have been sometimes quite typical and, indeed, indistinguishable from vesicles produced by current lymph. In others the vesicles, though typical and well formed where present, have not appeared along the whole of the line of incision, thus leading one to the conclusion that the culture, though active, was somewhat weak. It may perhaps be well, in order to convey some idea of the results ordinarily obtained, to give the record of a recent experiment as entered in my note-book.

Experiment.—Vaccine culture established in medium of—water 50 per cent., glycerine 16·5 per cent., albumin 33·5 per cent., inoculated with a vaccine lymph which had been preserved in glycerine until all foreign organisms had been killed out. The proportion of seeding material used was about 1 in 105,000. Two days later a calf was inoculated on the abdomen in a number of incisions. All the insertions failed. Five days later (the seventh day) it was examined microscopically. Groups of the diplobacillus were found. Four days later (the eleventh day) a calf was inoculated upon the abdomen. The incisions took and they produced typical vesicles in the proportion of 37·5 per cent. Lymph taken from these vesicles was used in the vaccination of a child. All five insertions took perfectly and presented typical appearances of vaccinia. Seven days later (on the eighteenth day) the culture was used for the vaccination of a calf. The incisions took perfectly and produced typical vesicles = 100 per cent. Lymph from the above vesicles was used for the vaccination of a child and produced good results. On the forty-ninth day the culture was used for the inoculation of a calf. When examined on the fifth day the animal presented no typical vesicles, but in the course of the lines of inoculation were certain shotty thickenings which seemed to indicate that some reaction had taken place. Upon revaccination with current lymph the animal proved to be insusceptible.

In examining the above record several points of interest present themselves. In the first place, it will be observed that the culture was a primary one—i.e., not a subculture—and it may be objected that such an experiment is valueless as the material used for seeding might conceivably give rise to the results obtained. I have, however, selected the experiment for that very reason as the facts appear to me to be sufficient to entirely exclude such an explanation. In the first place, although, as is well known, vaccine material may be diluted to a very large extent without entirely losing its power of giving rise to typical vesicles, yet when the dilution reaches 1000 times those vesicles are very few and far between, and when, as in the present instance, the dilution reaches more than 100,000 times the appearance of such vesicles is a very exceptional occurrence. Indeed a somewhat extensive series of experiments with lymph diluted in varying degrees has in my hands altogether failed to show any vesicle produced by a dilution at all approaching the above. Moreover, it will be observed that the culture in question when used for the inoculation of animals in the first few days of its existence *entirely failed to produce any trace of a vesicle.* Had there been any weight in the objection I have raised it would undoubtedly have been the case that the diluted lymph would have shown at least as great activity immediately after dilution as subsequently. That such was not the case is I think a strong argument in favour of a multiplication of the specific virus having subsequently taken place, and when it is recollected that the activity as shown by inoculation experiments increased from zero to 100 per cent., the evidence is almost conclusive. This gradual increase of activity is most significant, and I fail to see how it can be explained except upon the assumption that a multiplication had taken place. But the proof by no means rests altogether or even chiefly upon such evidence as the above. As mentioned before, subcultures are not specially difficult to prepare, and they show results in all essential particulars quite similar to those given by the primary culture.

Another very interesting point is in connexion with the behaviour of the culture in the later stages. It will be noticed that after its power of producing typical vesicles had become exhausted its use for inoculation upon an animal still gave rise to some local effect and, which is far more important, was able to protect against a subsequent inoculation with a virulent virus. By following up the indications given by such experiments as this it is not improbable that one may be eventually led to results which will render possible the immunisation of animals and human beings without the at present unavoidable concomitants of painful local reaction and unpleasant constitutional symptoms. I am at present following up these indications and I hope shortly to publish the results of my further experiments.

In estimating the success of the inoculation experiments I have not trusted altogether to my own judgment. Dr. Cory and Mr. Stott, Directors of the National Vaccine Establishment, have been kind enough to examine several animals for me and I have their assurance that the vesicles produced by my cultures could not be distinguished from those produced by current lymph in the ordinary working of their station, and it will be recollected that lymph taken from such vesicles has produced in children results in every way similar to those given by current lymph. Moreover, additional proof is afforded by the fact observed in every case where the experiment has been made that animals which have been inoculated with an active culture and have shown the characteristic reaction have proved on subsequent inoculation with vaccine lymph to be immune to the disease.

Sources of fallacy.—With reference to possible sources of fallacy it may be noted that doubt has often been cast upon experimental work on vaccinia carried out in a laboratory where vaccinated animals have been previously kept. Personally I believe that no fallacy is likely to arise from such a cause, and I base my opinion upon the following facts. In my early experiments, for the purpose of putting this question to the test, animals have frequently been inoculated over the greater part of the abdomen with ordinary current vaccine lymph and over a small area with a culture which was known to be sterile. In no single instance have the experimental incisions become contaminated with the vaccine virus. It is therefore, although doubtless within the bounds of possibility, yet at all events excessively unlikely that all, or a large proportion, of similar incisions made under similar circumstances and used for the testing of an active culture should become contaminated. In other cases there have been made over a limited area a number of experimental incisions some of which have been inoculated with an active culture whilst others have remained uninoculated. The rest of the abdomen has been covered with incisions inoculated with ordinary vaccine lymph. In no single instance in which such an experiment has been made were the uninoculated incisions found to show any trace of infection. It is, of course, possible, and indeed perhaps not improbable, that in the hands of a careless experimenter contamination might occur, and it is by no means unlikely that in a long series of experiments some few might be vitiated by untoward circumstances. In any case it appeared desirable to exclude every possibility of error from such a source and consequently, in every instance where an experiment had been carried out under circumstances which seemed to admit of any doubt being cast upon the result from the above or any other cause it has been repeated under conditions admitting of no such doubt and the first result checked. In this way the inoculation experiments have been repeated upon a vaccine-free farm and the results obtained have been quite as successful as those first arrived at.

The specific organism in the tissues of animals inoculated with the cultures.—As soon as it was discovered that inoculation of the pure cultures upon susceptible animals was followed by the development of typical vaccine vesicles, an examination of these vesicles was undertaken with the object of determining in them the presence of the specific organism. For this purpose vesicles as typical as possible were selected and were excised at periods of their development which previous experience had indicated as being most favourable. The pieces of tissue so obtained were hardened sometimes in absolute alcohol and sometimes in a mixture of equal parts of Müller's fluid and a saturated solution of mercuric chloride in a 1 per cent. aqueous solution of acetic acid. They were subsequently sectioned and were stained by the modified Gram's method or by Löffler's methylene blue. It is unnecessary to enter minutely into the appearances observed. Suffice it to say that examination revealed the presence of the diplobacillus, and that in morphological characters, in staining reactions, and in distribution it corresponded closely with similar bacilli observed in the sections of vesicles originally examined which had been produced by ordinary vaccine lymph.

Thus in the organism which I have described as the diplobacillus vacciniæ is found a virus which occurs in

the vesicles (and tissues surrounding them) of ordinary vaccinia, exhibiting special morphological characters and staining reactions and having a special distribution in the tissues. By special methods which have been indicated pure cultures of this organism may be prepared, and such cultures when used for the inoculation of susceptible animals give rise to vesicles which are described by experts as being indistinguishable from those produced by current vaccine lymph. Moreover the animals which have been so inoculated are found subsequently to give no reaction when revaccinated with active lymph. Finally, sections through the vesicles so produced are found upon examination to contain the organism in large numbers and exhibiting the same morphological characters, staining reactions, and distribution as the organisms originally found in the vesicles of typical vaccinia.

James-street, Hyde Park, W.

ON THE STRUCTURE OF THE SEMI-LUNAR AND FLAGELLATE BODIES OF MALARIAL FEVER:

AN APPENDIX TO "THE INOCULATION THEORY OF MALARIAL INFECTION."[1]

BY DR. AMICO BIGNAMI,

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AND

DR. G. BASTIANELLI.

AMONG the objections made by one of us (Bignami) to the hypothesis of Manson one had reference to the significance of the so-called flagellate bodies.[2] The following notes deal chiefly with the structure of the flagellate bodies. These bodies which, as we know, only form after the blood has been withdrawn from the circulation represent, according to Manson, parasites in sporulation the spores of which, "in the interests of the extra-corporeal life of the plasmodium," take on this special form of mobile and flagellated filaments. These forms therefore constitute the first phases of the malarial parasite outside of man. To this view one of us (Bignami) opposed the opinion of Grassi and Feletti, according to whom the flagellates are nothing but the dying forms of the parasite, and also pointed out that no one had hitherto demonstrated in these filaments the structure which ought to be found in spores, more especially the presence in them of chromatin. Subsequently various observers—as Marshall, Ross, and Manson himself—sought to determine experimentally the conditions under which flagellation occurs and they have thus shown the importance of moisture and of exposure to the air as affecting the process, and Manson, by staining preparations of blood containing the semi-lunar and round bodies (which had first been kept for a certain time in a kind of moist chamber and then dried) with a weak solution of carbol-fuchsin, attempted to demonstrate that the mobile filaments exist pre-formed in the interior of the round bodies from which they subsequently emerge.

In spite of these researches which have brought to light some interesting facts it may be affirmed that the structure of the flagellates of *human* malaria had not hitherto been studied by methods which permitted of a minute morphological analysis. Accordingly in the present year in following up our inquiries into the life of the parasite outside the human body we also studied afresh the formation of these bodies.

Regarding the internal structure of the flagellates we do not possess any information that we know of beyond that given by Sacharoff who, describing the structure of flagellates in crows taken from the nest, the blood of which contained innumerable parasites, considers the flagella as chromosomes originating in the nuclei of the body of the parasite and flagellation as a process of perverted karyokinetic division accomplished in a violent manner.

The researches conducted by us during the past summer had for their object the elucidation of the structure of the semilunar bodies, the flagellate bodies originating from these, and the flagellate bodies derived from the large rounded pigmented bodies belonging to the tertian parasite. For this purpose we employed a great many specimens of blood prepared after the method of Romanowsky. The staining was done on cover-glasses on which the blood was spread in the usual way and which were kept in a moist chamber for a length of time varying from ten to twenty minutes or even longer and then rapidly dried and fixed with absolute alcohol. We may say at once that in the majority of the flagellates the flagella or mobile filaments are thus seen to consist essentially of a filament of chromatin which is displayed with great distinctness by the method described. And we may add further that Professor Koch who worked during the summer in the Hospital of Santo Spirito at the subject of malaria succeeded in demonstrating by the same or an analogous method the presence of chromatin in the flagella of the flagellate bodies derived from crescents and showed one of us a specimen in which this was displayed.

The following are the main results of our researches. The flagellates originating from crescents, as well as those from the pigmented bodies of tertian fever, do not all present the same details of structure. Some—and they are not numerous—present the appearance of a protoplasmic body containing in its mass some filaments or blocks of chromatin. From the protoplasmic body project the flagella, generally four in number, made up entirely of a homogeneous substance stained pale blue like the protoplasm. It cannot be objected that in these cases the chromatin fails to be placed in evidence on account of deficient staining, because the chromatin contained in the body of the parasite is stained in the typical way. Other flagellate bodies—and they are more numerous—present a pigmented protoplasmic body of a spheroidal form in which the particles of chromatin have, so to say, emigrated to the periphery. From these peripheral chromosomes issue filaments of chromatin which constitute the principal part of the flagella. The latter in this case also usually number four. Finally there are a few flagellates some flagella of which contain chromatin, while one perhaps consists of nothing but protoplasm.

The structure of these mobile filaments is thus complex. According to our observations they consist of a thread of chromatin substance surrounded by a thin layer of protoplasm prolonged to both extremities. In the rare instances in which one succeeds in finding an isolated filament it would seem as if the chromatin substance tends to occupy the centre, while the two extremities consist of protoplasm. That there exists a continuous peripheral stratum of protoplasm cannot always be made out, but we have reason to think that this is a constant arrangement since even in those filaments which appear to be made up entirely of chromatin it is readily seen that at the points where, perhaps in consequence of the method of preparation, interruptions in the chromatin occur there is a substance faintly stained blue which maintains the continuity of the filament.

As regards the origin of these so-called flagella it can be shown, especially in the flagellates of tertian fever, that they arise from the nucleus. In fact, the large pigmented bodies of tertian fever when the process of flagellation is complete are seen to be divided into two masses. Of these, one mass consists of protoplasm strongly pigmented with granules of melanin; the other is a hyaline sphere with a few granules of black pigment round it from which the flagella issue. This hyaline sphere evidently represents the nucleus which has separated from the protoplasm during the interval in the moist chamber, the chromatin of the nucleus having in its turn emerged from the nuclear membrane to constitute the principal part of the flagella. This is the interpretation which the microscopic appearances seem to us to render most reasonable.

In the preparations made in this way and kept in the moist chamber it can also be clearly seen that all the crescents as well as all the ovoid and rounded bodies derived from them contain chromatin, for the most part in the form of small rods, filaments, and granules. In a former article,[3] in describing the structure of the crescents, we noted that in the greater number of cases their nuclear chromatin was not demonstrable; and, indeed, by the method we used—that of staining with hæmatoxylin and eosin preparations dried and fixed with equal parts of absolute alcohol and ether—it cannot well be seen.

Subsequently to this, Ziemann upheld the view very

[1] THE LANCET Dec. 3rd and 10th, 1898.
[2] THE LANCET, March 14th, 21st, and 28th, 1896.

[3] Studi sulla Infezione Malarica. Bullettino della Reale Accademia Medica di Roma, Anno xx., 1893-94.

energetically that the crescents have no chromatin substance, and on this ground he advanced the idea that they are sterile forms. It is not easy to understand how this observer could have arrived at such a conclusion, seeing that he used a method of examination practically identical with that employed by us and which has given exactly contrary results in our hands. Perhaps the reason lies in this—that Ziemann, working with preparations dried immediately after they were taken, failed to see the chromatin, concealed, as it probably was, in the midst of the rods and granules of black pigment surrounding it. On the other hand, in our preparations which were kept in the moist chamber the nucleus of the crescents as also the body itself being swollen up and the rods of pigment separated from one another the chromatin is rendered evident, becomes more or less swollen, and is stained by the method of Romanowsky in a typical way.

We shall not now enter upon a discussion of the significance which these structural characters permit us plausibly to attach to the crescents and mobile filaments.[4] It will be easily understood that those observers who, like Manson, look upon the flagellates as the first phase in the extra-corporeal life of the malarial parasite will find in these new facts fresh argument in support of their opinion. But we hold at the same time that they must not be considered as necessarily irreconcilable with Bignami's own hypothesis as to the significance of the semilunar bodies, especially when that hypothesis is studied in the more complete form in which it is presented in the last article written by us upon this subject.

Bignami's first hypothesis has been misunderstood by many, as Thayer and Hewetson justly observe.[5] We have indeed favoured the idea that the semilunar bodies are sterile on the grounds that one never sees in them any form of multiplication and that they have no relation to relapses; and these assertions, even in the light of these new observations, we still hold by as in accordance with the truth. In other words, we contended that the crescents are sterile bodies *in man* and *as far as man is concerned*. In fact, we put forward the additional hypothesis[6] that these bodies represent those phases of the life of the malarial parasite which in other parasites are continued and completed outside of the host. Should such migration from the host fail to occur, then that phase of life which cannot be completed except in the outside world or in a new host will be carried out in an abortive way and will terminate in forms of degeneration.

Certainly these new researches render probable the hypothesis that the cycle commenced in the blood of man is completed in some species of mosquito,[7] but they nevertheless do not negative the truth of the fact alluded to in our first hypothesis in those cases where the passage from man to the new host fails to take place.

Rome.

[4] A complete account of the results of these researches, not only in regard to crescents and flagellates but also to the structure in general of malarial parasites, will shortly be published in the Bullettino della Reale Accademia Medica di Roma.

[5] W. S. Thayer and J. Hewetson: The Malarial Fevers of Baltimore. The Johns Hopkins Hospital Reports, 1895, p. 215.

[6] Loc. cit., p. 37 of the extract, et seq.

[7] Since the above was written we, along with Grassi, have succeeded in demonstrating that the semilunar bodies do actually develop in the middle intestine of a mosquito (Anopheles claviger). It is probable that this is the same species as Ross's "dappled-winged" mosquito, in two of which he observed a similar development. These facts allow us to accept the above inferences with less reserve.

OPENING OF VICTORIA HOSPITAL, KINGSTON-ON-THAMES.—On Monday, Dec. 12th, the Duke of Cambridge opened the Victoria Hospital, Kingston-on-Thames, erected by the inhabitants as a memorial of the Queen's long reign. The site for the new building was presented by his Royal Highness. The freedom of the borough was conferred upon this Royal Highness who was subsequently entertained by the mayor at luncheon.

DIPHTHERIA IN SWANSEA.—The epidemic of diphtheria shows no signs of diminution and is exciting considerable anxiety in the town. Last week 37 cases were reported, against 39 in the previous week. The *Herald of Wales* complains that the medical officer of health, Mr. Ebenezer Davies, has directed that no particulars as to cases of disease notified shall be given to the press on the ground that notifications are private information.

ON THE ADMINISTRATION OF A CERTAIN MIXTURE OF CHLOROFORM AND ETHER IN GYNÆCOLOGICAL OPERATIONS BY MEANS OF A CLOVER'S INHALER WITHOUT THE BAG.[1]

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IN view of the great increase of the records of death during the administration of anæsthetics, methods and statistics, especially when obtained from large numbers of cases and classes of patients, have exceedingly great value, and I propose, with ap logies for some reiteration in what follows, to give the results partly of my own experience and partly of the experience of others in regard to a particular anæsthetic mixture and the special method of using it. Mixtures containing chloroform and ether, although viewed with disfavour by many administrators as being neither the one thing nor the other, have certain undeniable advantages, more especially when they contain ether in an effective proportion. In the German statistics now to be quoted the fact that the mixture shows a smaller death-rate than either ether or chloroform given separately points, in my mind, to the inference among others that an efficient quantity of ether had been added to the chloroform. Before describing and considering the method mentioned at the head of this paper I will first touch on several points in connexion with anæsthetic mixtures containing ether and chloroform.

German statistics of anæsthetics from 1890 to 1897, collected from scores of thousands of cases, give the death-rate in the following proportions according to Haenkel[2]: chloroform, 1 in 2039; ether, 1 in 5090; ether + chloroform, 1 in 7594. The Austrian mixture of ether one part, chloroform three parts, and alcohol one part is not included in the above statistics, for it contains only a small and probably ineffective proportion of ether.

Statistics of fatalities during the administration of anæsthetics notoriously vary greatly, and though the figures given may not be absolutely correct, yet if all unrecorded cases were published and added to the above figures I believe that probably the number of deaths would be found to be double those indicated by the above figures. In any case probably the proportion of deaths under chloroform to those under ether and the mixture is about right, and we may conclude that a mixture of ether and chloroform in which a sufficient quantity of ether is included forms probably the safest anæsthetic in common use for ordinary surgical work, for on the one hand the very real after-perils of ether are much diminished and the present dangers of chloroform are by its dilution and the addition of the stimulating ether in great measure obviated. It will be said that the administration of ether in suitable cases by men accustomed to its use has practically very little of danger and no doubt to a very large extent this is so, but much practice is needed to give ether with any great degree of comparative perfection and in such a way as to minimise the possible and real danger of after-bronchitis and pneumonia, more especially in abdominal cases. We therefore have not to consider the administration of anæsthetics by the specialist but as forming a part of the everyday work of the surgeon, house surgeon, or practitioner. Statistics of the Germans and practical experience go far to show that a mixture in all cases freshly prepared, such as the A.C.E. or a mixture containing ether and chloroform in which the ether is present in rather greater proportion than in the A.C.E. mixture—say in the proportion of 2 to 1 or 2½ to 1—is reasonably safe and probably the safest anæsthetic for routine use. Several cogent reasons are: (1) both ether and chloroform are diluted; (2) are given with plenty of air; (3) there is less chilling and irritation of the air-passages than when ether is given alone; (4) the breathing is more obvious than when chloroform alone is given; (5) the pulse and respiration are rather stimulated than depressed; and (6) the

[1] A paper read before the Birmingham Branch of the British Medical Association on Nov. 10th, 1898.

[2] Handbuch der Inhalations-Anästhetica, second edition, p. 61.

dangers of over-depression by chloroform or of over-stimulation by ether, the latter being a factor not always realised by the administrator, are to a certain and sometimes large extent avoided. We should strive as far as possible so to proportion the quantities of ether and chloroform in a mixture that the depressing effect of the chloroform (which is so markedly shown by the fall in blood-pressure) will be wholly or almost wholly counteracted by a proper amount of ether; indeed, it would be safer for the patient that there should be in the mixture a little more ether than would be sufficient to neutralise the general depressant effect of the chloroform—just enough, in fact, to slightly increase the fulness, strength, and rapidity of the pulse and the number and depth of the respirations and perhaps to make the breathing a little mucous in character. Thus the effect of the shock during operation will be lessened.

An advantage (first pointed out by Schleich of Berlin but not yet properly appreciated) of certain mixtures of about the above strength is that their boiling point—that is, point of maximum evaporation—more nearly approximates the temperature of the body than does the boiling point of ether or chloroform alone. Ether, e.g., boils at about from 34° to 35° C. and chloroform at about from 60° to 62° C., while the boiling point of the A.C.E. mixture is about 48° C. It is to be noted that the boiling point of ether prepared from methylated spirit is lower than that of ether prepared from rectified spirit, and if the former be used in such mixtures the resultant more nearly has its point of maximum evaporation at the body temperature than if the rectified ether be used. I can in practice detect very little difference, during administration or after it, between the two preparations of ether and nearly always use that prepared from methylated spirit. Practically, then, to a large extent the advantages of both ether and chloroform can be combined and the disadvantages mitigated by giving ether and chloroform in the proportion of 2 or 2½ or 3 parts of ether to 1 part of chloroform. If such a mixture be given openly in the case of children or by a Silk's celluloid or metal inhaler to adults one can, of course, increase the proportion of either constituent at will and conveniently.

I now give a description and a few statistics of a method of administering a certain mixture of chloroform and ether which is, so far as I know, nowhere else practised than in the Midlands, though here it has been in use for more than fifteen years and almost exclusively by gynæcologists, Mr. Lawson Tait being, I believe, its originator. This mixture is the routine anæsthetic here in Birmingham for most operations performed by the majority of gynæcological surgeons. The lengthened satisfactory experience of many operators, confirmed by favourable statistics which comprise thousands of cases, justifies to a large extent the great confidence reposed in the mixture and in its system of administration. The method to which I wish especially to draw attention consists briefly in the use of a mixture of ether and chloroform in the proportion of 2 parts of ether to 1 of chloroform by volume administered by means of a Clover's portable regulating inhaler without the rubber bag. The ether generally used in the mixture is the methylated variety, and of specific gravity of 0·720, while by some administrators rectified and by others methylated chloroform forms the other ingredient. I will first give the statistics:—

Hospital	...	4431 operations to the end of July, 1898, with	2 deaths.
Private (about)		9750 " " " "	1 death.
Total	...	14,181	3 deaths.

To show the proportion of operations performed in the Birmingham and Midland Hospital for Women under the influence of this mixture I looked through the record of operations for several months, and among them the month of May, 1898, and found that there were 32 operations for which the anæsthetics respectively were: In 27 the mixture of ether two parts and chloroform one part; in 2 chloroform; in 1 chloroform followed by the mixture; in 1 the mixture with the addition of more chloroform; and in 1 no anæsthetic. Thus the percentage of cases in which the mixture was used was 87·5. Again, taking other months at random for the sake of illustration, in another shorter month of this year 26 operations were all performed under the influence of this mixture = 100 per cent. In January, 1887, there were 22 operations, in every one of which this anæsthetic was used. In January, 1898, there were 32 operations in 30 of which this anæsthetic was used = 93·75 per cent. In July, 1898, there were 28 operations, in 25 of which the anæsthetic was used = 98 per cent. Thus on an average more than 90 per cent., really about 95 per cent., of the operations in the Birmingham and Midland Hospital for Women (and I believe the same assertion may be made regarding the operations in the Wolverhampton and District Hospital for Women) have of late years been performed under the influence of this mixture given by the method described, and nearly all the operations done in private by the staff of the above-mentioned hospitals have in recent years also been performed under its influence.

These statistics have especial value because they apply only to patients of the female sex and in perhaps 99 cases or more out of every 100 to adult women. Gynæcological operations are, taking them as a whole, longer and more severe in their nature than the usual run of general surgical procedures and as so many cases complicated by abdominal distension or pregnancy have to be dealt with and often at length the dangers of anæsthetisation are rather greater in proportion than those incurred in general surgery. As regards the deaths which have taken place during the administration of this anæsthetic one occurred in a patient who was extremely ill from chronic double pleurisy of an extensive nature and who also had an enormous ovarian tumour pressing upwards and embarrassing the heart and lungs. Operation was urgent in this instance. In another case, also the subject of a huge ovarian tumour which practically when the patient was in a horizontal position allowed very little movement to the heart or lungs, death occurred. Both of these cases would in all probability have ended fatally whatever anæsthetic had been used and operation was the only chance of life, for the patients were *in extremis*. In the third case[3] the mixture was administered to a very healthy middle-aged woman, nothing being found on physical examination to contraindicate an anæsthetic. Before she was fully anæsthetised, the patient suddenly became rigid, blue and pulseless and the breathing spasmodic, and death ensued in spite of the usual means for resuscitation. It was evident that for at least ten minutes after cardiac movements had completely ceased she was making efforts to breathe. About 3 drachms of the mixture had been used. At the necropsy no particular abnormality was noted except congestion of the brain. Death seems to have occurred from syncope. One of the deaths occurred in private and 2 in hospital practice. If we omit the first 2 fatal cases which would have so ended in any case it will be seen that practically there was only 1 death directly due to the anæsthetic in over 14,000 cases—a statement which I think could rarely be applied to the administration of chloroform alone by whomsoever and however given, and seldom to a similar number of ether administrations and which points to the comparative safety of this anæsthetic in the class of cases in which it has been used. About 50 per cent. of the operations have been laparotomies and speaking generally I think, as I said before, that gynæcological operations are in their nature at least as severe as, if not more severe than, the ordinary run of surgical procedures.

The boiling point or point of maximum evaporation of the mixture of two parts of the methylated ether and one part of the purest rectified chloroform is about 102° F., which is practically = 39° C. or a temperature slightly above that of the body. The advantage of such a boiling point has before been alluded to. Chloroform and ether forming together but a mechanical mixture, not a chemical compound, it might be thought that ether would come off more rapidly and leave in the end pure chloroform to be inhaled to the detriment of the patient and discomfiture of the administrator; but for the practical purpose of inhalation this difficulty does not occur, for so far as can be judged in practice by the smell of the mixture and the pulse and respiration of the patient there is no difference ascribable to the anæsthetic between the condition of the patient at the beginning and at the end of a dose poured into the receiver of the Clover's inhaler. As Dr. Hewitt in his book on "Anæsthetics" remarks of the A.C.E. mixture so in this case, "the ether present in the mixture certainly does not show that inclination to rapid escape which it has been supposed to possess." Probably because ether mixes freely with chloroform and alcohol it does not evaporate quite so rapidly as if given by itself, being held back by the chloroform and alcohol.

Practical points in administration.—1. The mixture must be freshly prepared, and so far as I can judge the pure

[3] Death under Mr. Lawson Tait's Anæsthetic Mixture: THE LANCET, July 14th, 1894.

methylated ether may be used with as good results as the rectified preparation. 2. The quantity is to be measured and used in exactly the same way as pure ether, except of course that the bag is not utilised and that the face-piece is not removed for air supply. 3. The body of the inhaler should be previously warmed unless the room be hot or the patient weak. 4. The face-piece must fit accurately and be kept in exact apposition to the face during the whole of the anæsthesia. 5. During induction of narcosis the indicator must be moved on much more rapidly than if ether were being given until it reaches "full," and be kept there till anæsthesia occurs. 6. When this happens the indicator in many cases can be brought back to "3," or even to "2," and kept there throughout narcosis. In some cases it has to be kept at "full," and in others even thus the patient cannot be kept fully anæsthetised unless artificial heat—e.g., a hot towel—be applied to the body of the inhaler to increase evaporation. The anæsthesia obtained is very like that following the use of the A.C.E. mixture, the pulse and respiration being stronger and more rapid than in the case of chloroform narcosis, and the colour as a rule is excellent throughout.

Advantages of the mixture.—1. It is very pleasant to the smell and taste and non-irritating to inhale in ordinary doses. 2. Induction of anæsthesia, in women at any rate, is rarely accompanied by excitement, rigidity, or struggling. The mixture compares favourably in these respects with the A.C.E. mixture, and whether the absence of those untoward symptoms is solely due to the absence of alcohol or is owing to this fact acting together with another—viz., that the musculature of women is generally weaker and far less used than that of men, is doubtful to my mind. 3. A quiet anæsthesia is obtained, very suitable for most operations, including laparotomies and perineal procedures, for there is no rapid heaving abdominal respiration as is the case with ether, and yet there is a distinctly stimulating effect as compared with chloroform. 4. In my experience patients suffering from most forms of heart trouble or from slight respiratory lesions, or even from bronchitis of moderate degree, take the mixture very well. Indeed, in most cases in which ether or the A.C.E. mixture is generally given this mixture acts admirably. I personally see no objection to its use in marked cases of renal disease. 5. After-effects of any kind are very rare, and I really cannot hear of any serious or even comparatively severe sequelæ attributable to administration; even if these happen in slight degree they are neither as persistent as those following the use of chloroform nor as troublesome as those after ether, considering that after-effects of serious character, especially in the form of respiratory troubles, are more likely to follow laparotomies than other operations and that about 50 per cent. of the cases quoted were operations of this nature, it is an important advantage to be able to predicate this point. 6. Owing to the fact that comparatively little chloroform is used noxious fumes of carbonyl chloride and hydrochloric acid are not so abundantly given off as when chloroform alone is given—say in a small, badly ventilated, and gas-lighted room. Again, there is less danger of ether vapour from the mixture catching fire in the presence of a fire or light than if it were being administered in the pure state.

Advantages of the method.—1. It is more convenient than any other way of giving the mixture; the apparatus can be managed with one hand and it needs very seldom to be removed for replenishment. 2. The quantity of the anæsthetic given can be accurately graduated and kept constant and is strictly limited to a certain moderate amount in the majority of cases; these I regard as most important points. 3. The utmost limit of quantity is in most cases little above that needed to maintain anæsthesia—i.e., the safety point can be only in small degree exceeded—and in very many instances that limit is practically the full quantity necessary for the purpose of anæsthetisation or even slightly below it, so that heat has to be applied to the apparatus to increase the rate of evaporation. 4. Thus it is generally difficult to give too much or a sudden overdose of the anæsthetic, and supposing that the operator has an inexperienced administrator or is operating without skilled assistance he can well induce anæsthesia himself and, putting the indicator to, say, "3," tell the anæsthetist or attendant to keep it there. If imperfect narcosis happens one can tell him to put the indicator at "full." 5. Anæsthesia is as easily and rather more quickly produced than by giving the A.C.E. mixture in the ordinary way—viz., by means of a Skinner's mask and Silk's inhaler.

Disadvantages of the mixture.—These are as a rule very few and slight in practice, as the difference in rate of evaporation of chloroform and ether does not seem to come into play to any extent. In very marked bronchitis or other pulmonary affection or in very old people or very marked cases of abdominal disease—e.g., large ovarian tumours or cases complicated by abdominal distension—the mixture is as safe as the A.C.E. mixture. Mild bronchitis is the chief sequela and is rare. I have not heard of pneumonia as a sequela. This lesion, on the other hand, is comparatively frequent after long laparotomies performed under the influence of ether. In a very few cases, especially in alcoholics, anæsthesia is imperfect and one must either increase the proportion of chloroform or adopt some other anæsthetic.

Disadvantages of the method.—These are likewise few. 1. In a cold room or with very strong or rather alcoholic women one has sometimes to warm the reservoir before use or afterwards to apply a hot towel to it. 2. It is not much good for strong or alcoholic men. I have not used it at all for children. There is no apparent danger in breathing the mixture, into which chloroform enters so largely, through the comparatively narrow air channels of a Clover's apparatus; as elsewhere remarked, the bag is even as a routine practice used by one skilled administrator until full anæsthesia has been induced, thus for a few minutes cutting off the air-supply altogether. Such a proceeding is the result of experience, not of following strictly the ordinary canons of anæsthetisation. The conditions generally held to contraindicate the use of the mixture are those in which by the majority of practitioners the administration of ether is contraindicated. This tends to show indirectly the distinct influence and efficacy of the proportion of ether present. Briefly, the mixture is not given in cases of marked pulmonary or renal disease or to old people or children. In all these conditions chloroform is to be preferred. Ether is practically never used by those who incline to this method of anæsthetisation, chloroform being the alternative anæsthetic. As during the administration of all anæsthetics untoward events may and do occur, so with this mixture. There have been times when there has been great anxiety for the patient, when artificial respiration and other means of resuscitation have had to be resorted to, and when another anæsthetic has had to be substituted for the mixture, but so far as I can learn causes for uneasiness do not arise so frequently as during the ordinary administration of ether or chloroform alone, and the general opinion of the surgeons who operate during narcosis produced by this method is most favourable—indeed, they have more confidence in it than in any other anæsthetic and their experience, individual and collective, of other agents as well as of this mixture has been large.

Mr. Lawson Tait's large experience of chloroform, ether, bichloride of methylene, and this mixture induced him to write to me as follows: "Then [i.e., about the year 1882] we found a mixture do well—2 ether and 1 chloroform—and that I believe is the best of all anæsthetics, save in old age and damaged kidneys, for all kinds of work. I think if introduced by nitrous oxide it would be an ideal anæsthetic." The opinion and experience of the many other gynæcologists in the Midlands who use the mixture coincides with that of Mr. Lawson Tait. Personally I have used the mixture in a good many cases of operations on women and very occasionally have administered it to men, and have formed a high opinion of its merits for gynæcological operations as given by the method described. In only one case, that of a very alcoholic woman, have I not been successful in inducing anæsthesia, but was obliged to resort to chloroform. Its chief demerit is to my mind the trouble of applying heat to the apparatus if the room be cold or the patient strong or rather alcoholic. One skilled administrator often uses the bag until the patient is anæsthetised, affirming the safety and humanity of rapid induction of anæsthesia. Equal parts of chloroform and ether have been given by this method and more than once, I believe, even pure chloroform, without untoward result. Finally, the procedure described seems to fulfil its object admirably in a certain class of patients—viz., women subjected to more or less the same kind of operation (i.e., abdominal or gynæcological)—and that much-to-be-desired end, that of making it difficult to give too much of the anæsthetic, is in many cases partially and in some cases wholly attained without the use of novel or cumbrous apparatus or the adoption of inhalers which require constant watching and draw the attention of the administrator from the condition of the patient.

I must now express my indebtedness and thanks to Mr. Lawson Tait, Dr. Thomas Savage, Dr. A. E. Clark, Mr. J. W. Taylor, Mr. Christopher Martin, Mr. J. Furneaux Jordan,

Dr. Frederick Edge, and to the committee of the Birmingham and Midland Hospital for Women for kindly allowing me to make use of their records in order to compile the statistics and also for giving me much information on the subject of this article.

Birmingham.

ON THE PREVENTION AND CORRECTION OF SHORT LEG IN HIP DISEASE.

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No matter what care may be taken in the early treatment of hip-disease a certain amount of subsequent deformity seems inseparable from a large number of the cases. The percentage is variously stated by different authors at between 70 and 80. Doubtless certain factors tend to lessen this estimate, prominently amongst which may be placed an early diagnosis and treatment and the efficient mechanical control of the limb. I am obliged to admit that in my own practice until lately in a proportion of cases (certainly a small one) even where a patient has been presented to me without appreciable deformity I have been powerless to prevent

FIG. 1.

A. B., aged twenty four years. Practical shortening 4 in.

shortening. That my experience is not unique is proved by the literature of the subject and by the continued efforts made by surgeons at home and abroad to devise methods for the prevention of short leg. Of one thing we may rest assured that however effectually we may by mechanical means modify deformity in active arthritis much more radical measures are required where the joint is sound but ankylosis and deformity remain. It is with the view of endeavouring to simplify the methods of preventing adduction and to facilitate its correction once it has occurred that I submit this statement for consideration. The deformities which constitute short leg comprise all or most of the following conditions—viz.: flexion, adduction, internal rotation, tilting of pelvis, and arrest of growth. The first four of these conditions—viz., flexion, adduction, internal rotation, and tilting of pelvis—I venture to think may in the future be

FIG. 2.

Same case as Fig. 1. After transtrochanteric osteotomy. No practical shortening.

avoided where we have an early case to deal with. Obviously, we can only modify the shortening caused by arrest of growth by deflecting the pelvis sufficiently to ensure apparent equality of the limbs. Without entering into a discussion as

FIG. 3.

A boy, aged ten years. 4 in. practical shortening.

to the causes of short leg I would state that, contrary to the teaching of surgeons, it often occurs without the complication

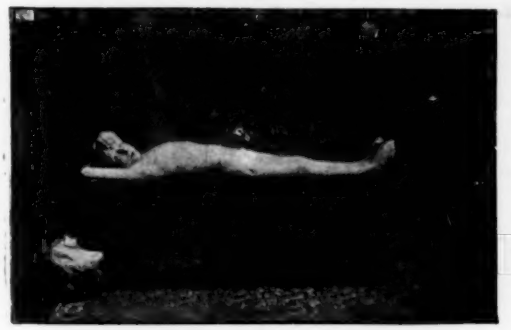
of abscess, that it often occurs very suddenly, and that in quite a number of cases it happens in robust children and is absent in the weakly and emaciated. I would further add that though abduction is usual in the so-called first stage of hip disease I have frequently noted in cases with what may be called a strongly deforming tendency that adduction

FIG. 4

Same case as Fig. 3. After osteotomy and abduction. Pelvis has been lowered on diseased side and shortening obliterated.

is present almost from the first and that abduction has not once been noted in the so-called first stage. Again, it must be recollected that adduction may occur without tilting of the pelvis and without displacement of the femoral head. In proof of the fact that body weight is not the all-

FIG. 5.



Same case as Figs. 3 and 4. Shows the apparent lengthening by pelvic depression of leg which was 4 in. short.

important factor in the production of deformity, as many authors would have us believe, one has only to adduce the fact that the whole series of elements which make for short leg may appear while the patient is lying in bed.

The best routine appliance for hip disease is undoubtedly the Thomas splint and I always use it in those cases where it is sufficiently effective to control deformity. For this purpose the abduction body wing should generally be employed and the not easily or generally acquired art of its application should be thoroughly mastered. In some cases, however,

FIG. 6.

Abduction splint.

where the structures about the joint seem to thicken early and glide backwards I am using a special abduction splint (Figs. 6 and 7). The new splint is so designed as to keep the diseased limb fixed in an abducted position and it effectively prevents any elevation of the anterior superior spine on the sound side; it governs rotation, flexion, and abduction

FIG. 7.

Abduction splint applied.

and in my belief solves the problem of the prevention of short leg, for by its help I can with confidence predict in every early case that recovery will take place without shortening provided we have not to deal with arrested growth. The importance of this assurance will be appreciated when we note that while shortening occurs in, say, 70 per cent. of the cases arrest of growth in any but a barely recognisable extent

occurs in not quite 15 per cent. This arrest I find is usually not confined to the femur but is shared by the other bones of the limb.

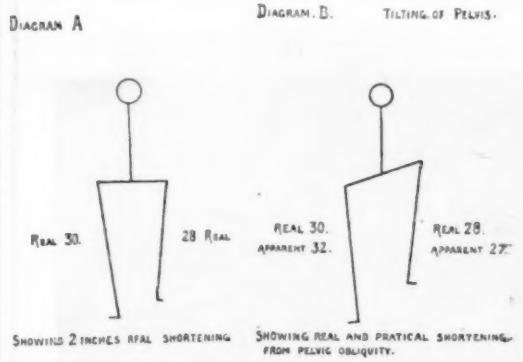
In a discussion held lately at the Clinical Society of London, at which I was present, Mr. Watson Cheyne, in order to emphasise an argument, stated that "no one would ever think of immediately straightening a hip or knee during any stage of tuberculous activity." Mr. A. E. Barker took a similar view and referred to the dangers of general infection. In a later conversation which I had with these gentlemen I fully realised the wide difference there exists between metropolitan methods and those I have been accustomed to follow. In the practice of the late Mr. H. O. Thomas, in that of Mr. Rushton Parker, and in my own, it has always been the custom to rectify with varying degrees of force any tuberculous joint in a wrong position, so far as that phrase might be applied to the deformity known as flexion. I should scarcely like to attempt to guess how many hundreds of such cases have passed through my own hands. Not only have I never as a preliminary condition waited for recovery to take place from the tuberculous process, but I have looked upon the active stage as that most appropriate for reduction on account of the great facility with which it may be effected. In the case of the knee particularly I commonly reduce an angle of from 30° to 40° and allow the patient to travel home the same morning, sometimes a considerable distance. I am not aware that my statistics are in the least harmed by such seemingly rude methods; on the contrary, I have every reason to be more than satisfied with the results. In the case of the hip even extensive flexion deformity does not shorten the limb to nearly the extent that adduction with pelvic tilting does, and I have for some time directed my chief attention to preventing displacement of the head and to keeping under control the level of the right and left anterior pelvic spines. My practice now in all cases of displacement of the head is to endeavour to at once reduce shortening by force sufficient to effect this purpose. If this be attempted while disease is active and before ankylosis, either fibrous or bony, has had time to take place scarcely any difficulty is experienced and pulleys have rarely to be used. This, of course, refers to the case of children. The force that governs the displacement generally suffices to rectify pelvic obliquity, while the flexion can be overcome at the same time by ordinary methods. If the case be of long standing and the structures around the hip-joint are much thickened two or three applications of the pulley may be required at intervals of about a week. In cases where the tuberculous process has subsided and ankylosis remains certain further procedures are necessary and will be described later. Having restored as far as possible the displacement of the hip and the length of the limbs the patient is placed in the new abduction apparatus, where, as I have stated, the parts are so combined as to effectively prevent the slightest tilting of the pelvis in any but in the direction of advantage to the diseased side. The patient is maintained in this apparatus until the phase of disease productive of deformity has passed. When the disease admits of it he may be transferred to an ordinary walking splint, the abducted limb meanwhile being brought into its proper position, but practically during the whole of treatment he should live in the open air. I am quite convinced from my own practical experience that this abduction splint is an effective preventive of adduction, but if further argument were needed it is supplied by the fact that without recourse to force one can by its use gradually overcome any moderate amount of shortening which may be found to have occurred in a recent case. If it can correct deformity it can much more easily prevent it.

I would now deal with another important class of cases. I allude to those cured of their hip disease, some of whom are children and some adults, and who may have shortening varying from 2 in. to 6 in. or 7 in. due to femoral displacement and oblique pelvis. I have operated already upon about 50 such cases and can speak most hopefully of the results. And here it may be well to mention that if we are to keep anything like an accurate record of these deformities we should employ a simple method of measurement for fixing the degree of adduction and estimating practical and real shortening. (Diagrams A and B.) Osteotomy, as we know, has been practised for years to overcome the deformity of flexion. Rhea Barton performed it in 1826 and he was soon followed by Clemmot, Rodder, Maisonneuve, and others. Adams first performed the operation subcutaneously by dividing the neck of the femur. The other operators worked lower down but only Gant divided below the lesser trochanter. Probably Gant's operation is the most popular to-day, but personally I prefer that of Adams if we only have to deal with the deformity of flexion. Although something must be said in favour of a section which cannot be interfered with by a shortened psoas and iliacus, yet I have found that in cases of right-angled deformity of the hip the upper part of the femur left fixed after Gant's incision has an ugly way of encroaching upon Scarpa's triangle. Of this I am also certain, that even if an osteotomy incision be made through inflamed tissue, as must sometimes occur in Adams's operation, union is not in the least hampered. Personally, with a view of not merely rectifying a flexion angle which has been the general object of a femoral osteotomy but with the intention of lessening or obliterating adduction with pelvic tilting, I make my incision obliquely through the great trochanter (Diagram F). This often involves hard work because of the thickness and the sclerosed condition of

FIG. 8.

Modification of Adams's saw.

the bone. The work is much facilitated by having a small knob on the end of the saw, such as one which Weiss has made for me (Fig. 8). One can saw with much more energy when there is no danger of either transfixion or of losing one's place. It is better where practicable to saw completely through the bone rather than a certain distance and I prefer going through the trochanter because of extra callous exudation, as an ununited fracture will frustrate the object of the operation. The adductors are next subcutaneously divided and in the case of a youth or adult traction is applied by means of pulleys. Very often an inch or an inch and a half may be

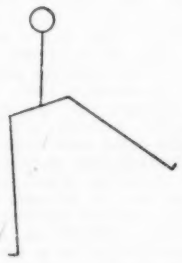


gained by this traction (Diagram F) and in this way some of the shortening of actual displacement may be combated. The leg, still fully extended, is placed in a position of abduction (Diagrams C and G), which varies with the degree of pelvic tilting. The greater the tilting the greater should be the abduction. The pelvis on the sound side is fixed and the abduction splint is applied and extension and abduction are maintained (Fig. 7). Seven or eight weeks are allowed to elapse—until, in fact, bony union is completed with the limb in abduction and at an angle with the body.

It is now to be noted that the length of the limbs may be equalised in one of two ways or by a combination of both

ways—either by lessening the practical length of the sound limb or increasing that of the short one. By osteotomy and extension the leg is actually lengthened (Diagram E), and by the osseous union of the femur in abduction with the pelvis the elevation of the pelvis on the opposite side is

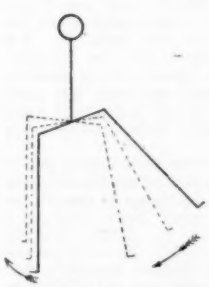
DIAGRAM C



POSITION OF LEG AFTER TRANS TROCHANTERIC OSTEOTOMY.

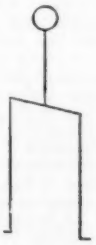
effected. With an outstretched thigh in one piece with the trunk it is clear that the limb can only be adducted at the cost of elevating the pelvis on the sound side, and in this way several inches of shortening may be remedied (Diagram D).

DIAGRAM D



SHOWING ELEVATION OF PELVIS ON SOUND SIDE BY BRINGING ABDUCTED LEG INTO POSITION.

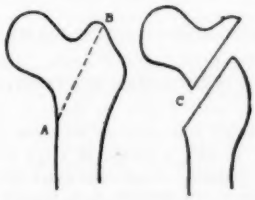
DIAGRAM E.



SHOWING FINAL RESULT WITH ABDUCTION OF LEG AND ELEVATION OF PELVIS OF SOUND SIDE

A more difficult class of case to deal with is that where short and firm fibrous union obtains. In such cases I am accustomed to divide the adductors and extend and forcibly abduct and if attempt at lateral movement threatens fracture I perform an osteotomy as if for bony ankylosis; indeed, it is better in such cases to proceed forthwith with osteotomy

DIAGRAM F.



A.B. LINE OF SECTION THROUGH TROCHANTER.

C. LENGTHENING AFTER TRACTION.

rather than complicate the issue by forcing the fibrous bands. Such cases require to be kept much longer in a splint than do those where the fixation is bony and in two or three instances, from a want of experience in this matter, the early removal of restraint has resulted in some return of deformity. It might be supposed that this fibrous union would still allow the adductors to act, no matter how long the restraint and stretching, but this is not so provided sufficient abduction is obtained to counteract any subsequent slight fibrous contraction. If the limb be abducted for a sufficient length of time further contraction is not likely to occur and this accords with what may be assumed to be a surgical axiom that a deformed limb due to arthritis retains the same degree of movement after correction as it possessed before and that if ankylosed at the moment of rectification it is equally ankylosed when reduction is completed. When the splint has been removed the patient should be confined to

DIAGRAM G.

POSITION OF FRAGMENTS WHEN LIMB IS ABDUCTED.

bed for some time until the abducted limb is gradually brought into position and exercises should be prescribed designed to elevate the pelvis on the sound side and depress it on the diseased side. These exercises are very necessary adjuncts and in the case of adults especially because they materially improve the character of the walk.

I do not now enter into the question of pseudo-arthrosis except to state that its results in my hands are most uncertain and that by its attainment the rectification of deformity is not at all complete. I now almost exclusively employ it for the relief of double ankylosis. Of the 50 cases of bony ankylosis upon which I have operated by the trans-trochanteric osteotomy with abduction I will merely briefly state that in most of the cases the practical shortening has been obliterated and that in the rest it has been lessened almost to the point of disappearance. Suppuration has not occurred nor have there been any symptoms of gravity. The pain, which in my earlier cases was marked, can be avoided by a careful adjustment of the groin strap. In 2 cases tuberculous abscess has presented itself, but in both the operation was performed and the disease recovered from. The general health, as evidenced notably by sleep and appetite, has been well maintained.

In conclusion, for the prevention of short leg I suggest: (1) that abduction of the diseased limb should be maintained; (2) that the apparatus to attain this should also govern flexion and adverse pelvic tilting; (3) that where arrest of growth threatens pelvic obliquity should be summoned to assist; and (4) that where displacement of the head has occurred immediate reduction should be attempted. For the correction of short leg with bony ankylosis I suggest: (1) that oblique transtrochanteric osteotomy should be performed; (2) that the adductors should be subcutaneously divided; (3) that the limb should be placed in the position of abduction and extension and kept there until firm union occurs; (4) that after union the splint should be removed and the limb allowed to slowly leave the abducted position; (5) that exercises should be systematically performed in order to depress the pelvis towards the affected side; (6) that in case of fibrous ankylosis where no osteotomy has been performed in order to avoid recurrence the abduction should be maintained for considerably longer; and (7) that this treatment should as much as possible be carried out in the open air.

Liverpool.

BORIC ACID IN MILK.—At the Pontypridd Police-court on Dec. 7th a milk vendor was ordered to pay £1 1*s.* 6*d.* for selling milk which the public analyst stated contained 13½ grains of boric acid to the gallon.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF ASTHMA DUE APPARENTLY TO ARTERIAL SPASM.

BY JOHN C. THOROWGOOD, M.D., F.R.C.P. LOND.,
CONSULTING PHYSICIAN TO THE VICTORIA PARK HOSPITAL FOR DISEASES OF THE CHEST.

THE commonly accepted belief that spasmodic asthma is due to a contraction of those muscles which encircle the smaller bronchial tubes is undoubtedly correct in the majority of cases. It appears to me, however, that there are some cases where the real essence of the seizure lies in a spasmodic contraction of the blood-vessels rather than of the bronchial muscles. If this be so we can readily understand how it is that many competent observers, such as Hyde Salter and Trousseau, have likened an attack of asthma to an epileptic seizure.

Early in 1897 a young married woman was sent to me by Mr. Nichol Cox of Galloway In her case I believed arterial spasm had much to do with causing the very severe fits of dyspnœa which from time to time assailed her. The patient was of spare build and of nervous temperament and for some years she had been subject to seizures of asthma. She had a quick pulse, weak cardiac sounds, and prolonged expiration, but very little true wheezing sound was heard in the lungs. She told me that all cigarettes and fuming inhalations made her worse. Shortly after her visit to me I saw her in a very severe paroxysm of asthma. Her appearance then reminded me much of that of a person suffering from angina pectoris. Her pulse was 120 and small, and her chest movements were up and down with no true expansion. The wheezing sounds were not so marked as one would have expected from her appearance. The intense pallor and anxious face of the patient made me think of arterial spasm, and the remedy which ought to succeed in such a case should be one which would dilate the vessels. Drop doses of liquor trinitrini did good, but they did not seem to me so efficacious as repeated doses of chloral hydrate (10 gr.). Under this last medicine the relief was unmistakeable and when I called the next day all the asthma was gone and the patient to all appearance had become well. Two months later I heard that she had been to Aix-les-Bains and had returned with a gain of flesh and much general benefit.

This case may not seem a very extraordinary one, for there is plenty of evidence to show the value of chloral hydrate in relieving spasmodic asthma. It is worth while, however, to consider how far arterial spasm may be concerned in the production of some forms of sudden dyspnœa. The failure of ordinary fuming inhalations to give any relief was a prominent feature in this case, while vaso-dilator medicines acted speedily in relaxing the spasm. Dr. Lauder Brunton has recorded an interesting experiment in which he injected a little muscarin into the jugular vein of a narcotised animal with the effect of at once producing a blanched and anæmic condition of lungs with empty left heart and gorged right ventricle and vena cava. Atropin afterwards injected restored the balance in the circulation. In the case narrated I expect the lungs were during the paroxysm of dyspnœa blanched and anæmic from arterial spasm. Belladonna was not tried, it appears, as a remedy during the time the patient was under my observation as the action of chloral hydrate and subsequently of small doses of Fowler's solution with valerian effected all that was desired.

Welbeck-street, W.

POST-PARTUM HÆMORRHAGE TREATED BY SALINE INJECTION.

BY F. DE JERSEY, M.B., CH.B. GLASG., L.R.C.P. EDIN.,
ASSISTANT MEDICAL OFFICER, WALSINGHAM UNION.

HAVING read the very interesting article on the Injection of Saline Solution in Shock by Mr. Thelwall Thomas in THE LANCET of Nov. 26th I record the following note on a case which came into my hands and which corroborates very markedly what Mr. Thelwall Thomas says—namely, that saline solution acts as a very powerful stimulant to the circulatory system by repleting the circulation and by stimulating the heart.

I was on August 5th, 1898, called to attend a woman, about forty years of age, who was in her thirteenth confinement. On my arrival I found her utterly collapsed, the radial pulse was imperceptible, and she could only be momentarily aroused by shouting at her. She was lying on her back seemingly dead, like a corpse being perfectly blanched, in a mass of liquid and coagulated blood. She must have lost all the blood she possibly could. The child had been born an hour and a half. The delay in my arrival was due to the fact that the patient lived 4 miles away and that the husband had not sent for me soon enough, the child being born shortly after he left home. The after-birth had not come away and seeing the imminent danger that the woman was in and taking into consideration the circumstance that the placenta was not in the vagina and could not be removed by compression of the uterus I concluded that it was adherent, so I at once rapidly prepared some saline solution (1 drachm to the pint of hot water) and injected about 2 pints into the rectum, having previously administered a dose of ergot to arrest further hæmorrhage after the injection. In a very few minutes the radial pulse returned and in about ten minutes the patient opened her eyes and wanted to turn over on her side. Mr. C. E. Gooderson Bateman, the medical officer of the district, being away Dr. Fisher of Fakenham was called in, as I found that the placenta was so adherent that chloroform anæsthesia was necessary whilst its removal was effected. On his speedy arrival chloroform was administered and the after-birth was completely removed. Before leaving the patient the pulse was 125 and very thready. She felt very comfortable and asked for nourishment. In the evening of the same day the pulse was 120 and the temperature was 100·2° F. For a week or more the pulse was rapid and the temperature was about 100°. The woman was a heavy drinker, which was unfavourable to a rapid recovery, but after a somewhat troublesome time she to all appearance completely recovered, leaving the district three months after her confinement.

The hæmorrhage in the above case was undoubtedly due to carelessness. A woman was called in just before the child was born to attend to the patient and in trying to remove the placenta by traction on the cord must have produced a bleeding surface by partially removing it. Seeing that she was doing no good but only producing hæmorrhage she fortunately desisted from making further attempts, but unfortunately lost her head apparently and did not try in any way to stop the bleeding. What could one expect from one of these so-called midwives or women who kindly offer their services on such occasions?

The case is of interest as showing with what great rapidity saline solution acts even if it be injected into the rectum, thence passing up into the bowel by gravitation, where owing to the large absorbing surface the fluid quickly gets into the circulation. It must act like a sponge where a large quantity of blood has been lost.

Walsingham, Norfolk.

PERFORATED GASTRIC ULCER.

BY T. JENNER VERRALL, L.R.C.P. LOND., M.R.C.S. ENG.,
SURGEON TO THE SUSSEX COUNTY HOSPITAL.

TWO points of detail in laparotomy for cases of perforated gastric ulcer are worthy, I think, of more stress than is generally laid upon them. Some time ago I lost a patient in whom it was found post mortem that, though the ulcer on the anterior surface of the stomach remained soundly closed as at the operation, another ulcer on the posterior surface exactly opposite the first had given way and hence there had been a fresh outbreak of peritonitis. The interval between the attacks being quite short the ulcer at the back would probably have been discovered if a thorough examination of the stomach had been made at the time of operation. In commenting on this case I suggested that a systematic examination should be made in all cases, approach being

obtained through the great omentum. My colleague, Mr. Furner, in a paper on complications arising in this condition, pointed out that subphrenic abscess often followed a focus of infection in the lesser peritoneal cavity. He alluded to my suggestion of opening this cavity as a matter of routine and urged that the liability to subphrenic abscess was an additional argument in favour of adopting this rule. It should be done at the end of the operation, for if flushing has been the mode chosen for cleansing the abdominal cavity portions of septic matter may have been carried through the foramen of Winslow and so have fouled the lesser cavity which was perhaps fairly clean. I hold that flushing with hot saline solution aided by gentle but careful exploration with the fingers of all peritoneal recesses forms the best method of cleansing. Before flushing is begun I insert a glass tube into the pelvis through a separate opening above the pubes. I then cleanse the lower two-thirds of the abdominal cavity and remove portions of food, shreds of lymph, &c., which will have run down largely into the pelvis. After a while the fluid will run out clear as it went in. Turning then to the upper part of the cavity we shall open in succession various recesses with fresh collections, all of which will be swept down and out through the glass tube. By doing this systematically we shall escape much risk of leaving some part uncleansed. When, finally, no fresh clouding of the saline solution is seen we shall know that the peritoneum is clean. I know well that there are cases in which nothing short of sponging will remove adherent lymph, but, as a rule, I believe that the washing and gentle use of soft finger-tips will do as well.

Brighton.

EXFOLIATION OF THE COCHLEA.

BY F. FAULDER WHITE, F.R.C.S. ENG.

HONORARY SURGEON TO THE COVENTRY AND WARWICKSHIRE HOSPITAL.

THE patient was a woman, aged twenty-eight years. She had suffered from a discharge from the right ear from childhood. In September, 1897, she had a severe illness, her account of which is as follows: "It began with severe pain in the ear and right side of the head. I had constant vomiting for twenty-four hours. I became delirious and did not know where I was for several days. The doctors applied ice to the head and poulticed the ear. I was in bed for six weeks." She gradually got better but has been in poor health ever since. The discharge continued to be profuse and was very offensive. She says that her medical attendant told her that it would be very dangerous to check the discharge. She came under my care in October. I found the middle ear full of an offensive discharge and she was quite deaf on the right side. Having admitted her into the hospital I ordered frequent syringing with a hot solution of silico-fluoride. The patient rapidly improved but there were two or three polypi which required removal, and while extracting these my forceps brought away a small piece of bone which was loose in the middle ear. This proved to be the modiolus of the cochlea with part of the osseus spiral lamina. The patient made a rapid and perfect recovery. The ear is now dry and sweet, the inner wall presenting a regular surface, and there is nothing in its appearance to reveal the somewhat unusual deficiency.

Such a case as this shows what nature can sometimes effect without operative interference and every month furnishes me with fresh proof of the reparative powers of the tissues in the middle ear and the adjoining cavities. The vitality of the tissues is lowered by septic organisms, but even after half a lifetime of neglected otorrhœa the middle ear may be restored to health by proper treatment. Yet half the patients who come to me have been under treatment elsewhere without relief or have been professionally advised that it was dangerous to meddle with the ear. Even in works on otology one fails to find any adequate protest against the everyday neglect of this disease. Some aural surgeons, indeed, write as if nothing could be more dangerous, but the hope held out is through operative interference. In uncomplicated cases this is, to say the least, unnecessary.

Coventry

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

UNIVERSITY COLLEGE HOSPITAL.

A CASE OF GUMMATOUS ULCERATION OF THE SCALP BECOMING EPITHELIOMATOUS; TREATMENT BY SCRAPING.

(Under the care of Mr. A. E. J. BARKER).

THE chief interest in this case is connected with the occurrence of an epitheliomatous ulcer on the scalp in a patient thirty years of age. The history of the case and the characters of the ulcer when first seen were definitely in favour of a gummatous origin, but the failure of the anti-syphilitic treatment and the histological examination of a portion of the margin of the ulcer proved fairly conclusively that it was epitheliomatous in nature. The phenomenon of a gummatous ulcer developing into a squamous carcinoma is not rarely to be seen in the tongue and occasionally on the lower limbs, but so far as we are aware it has not hitherto been described as occurring on the scalp in a patient of this age.

A woman, aged thirty years, was admitted into University College Hospital on Dec. 2nd, 1896. Four years previously she had had a somewhat prominent pimple on the vertex of her head; this was accidentally pricked with a hat pin and a scab formed; when the scab came off a small ulcer was left. A little later a blind fell on to it and made it bleed. It had been operated on on two occasions at another hospital and she had been treated medicinally, but no real improvement had resulted and the ulcerated area had steadily grown larger. There was nothing in the family history of importance except that an aunt was said to have died from cancer. On admission the patient appeared to be in fairly good health and nothing abnormal was found in any thoracic or abdominal organ. On the vertex of the scalp, rather to the right of the middle line, was a large irregular ulcerated surface measuring about 2 in. in diameter. The margin of the ulcer was crenated and the edge was fairly sharply cut except on the right where it was raised and slightly everted. The depth of the ulcer varied, but towards the right side it was nearly ¾ in. deep. The floor was covered with slough and discharge and at one part there was an evident pulsation. The ulcer was thought to be probably gummatous, though the edge in parts looked epitheliomatous. On admission 5 grains of iodide of potassium were prescribed with tonics and cod-liver oil, and the sore was dressed with sal alembroth gauze. The amount of iodide of potassium was doubled on the 7th and the ulcer was dressed with lotio rubra. The patient was much troubled with constipation which, however, soon yielded to treatment. On the 19th the iodide of potassium was increased to 30 grains three times a day. On Jan. 1st lotio nigra was used to the ulcer, but it appeared to cause a good deal of sloughing, so it was discontinued and lotio rubra was used once more on the 3rd. The ulcer did not make any definite progress, neither did it get any worse. On the 5th the patient complained of severe headache, and caffeine citrate and phenacetin were ordered at night to relieve it. On the 7th the iodide of potassium mixture was ordered to be given in the morning only, and mercurial ointment was ordered to be rubbed into the thighs once a day. The ulcer began to clear up and some of the sloughs separated, and lead lotion was substituted for the lotio rubra, but by Feb. 1st it was evident that very little real improvement had taken place and some fresh small outlying ulcers were noticed. A week later a nitrate of silver lotion (four grains to the ounce) was used. On the 20th, as the ulcer showed no signs of healing, nitrous oxide gas was administered and Mr. Barker removed a small piece of the thickened edge of the ulcer for diagnostic purposes. When this piece was examined microscopically it

was found that there were numerous down-growths of the epithelial cells arranged in columns and irregular groups; the cells were squamous in type and a few small cell nests were seen. The anti-syphilitic treatment was persevered in but without any beneficial result and on March 30th, 1897, the patient left the hospital. She was re-admitted on April 20th, 1897, and it was seen that the ulcer had hardly changed in appearance. The surface was covered with pink granulations and at one part there was a small yellowish slough. To the right of the main ulceration there was a small ulcer. Around the larger ulcer the skin was much thickened and the base of the ulcer could not be moved over the bone beneath. At one part the raised margin was nearly a third of an inch above the surrounding scalp. On April 25th, the patient being under ether, the whole mass was thoroughly scraped with a Volkmann's spoon. It was found to be firmly attached to the bone which was in parts eroded and at one spot it was completely perforated, the dura mater being exposed over a space ¼ in. in diameter. The skin and tissues around the margin of the ulcer were also removed. The wound was washed with perchloride of mercury lotion, iodoform was dusted over it, and it was dressed with iodoform gauze and wool. Iodide of potassium was given internally at first, on admission 7 grains and later 15 grains three times a day. To this were added 10 grains of iodide of sodium on April 29th. The wound was dressed every other day and healthy granulations soon appeared. On May 7th the wound had diminished in size, was granulating well, and looked healthy, and on the 13th she left the hospital with a small healing ulcer.

ROYAL ALBERT HOSPITAL, DEVONPORT.

A CASE OF DISLOCATION OF THE KNEE.

(Under the care of Mr. F. E. ROW.)

DISLOCATIONS of the knee are by no means frequently seen, for although there is nothing in the shape of the osseous surfaces to keep the bones in apposition the ligaments of the joint are numerous and strong. Of all the traumatic dislocations which may occur at this articulation the lateral is by far the most common. In the case which is recorded below the displacement was partial and it is very rare indeed that complete lateral dislocation is met with and if it does occur the dislocation is almost certain to be compound. The flexion and eversion, which were well seen in this case, are generally present and reduction was effected, as is usual, with great ease, for to permit of displacement both the internal and the external lateral ligaments and the two crucial ligaments must have been torn; there is nothing, therefore, to resist reduction. Persistent weakness of the joint is very liable to occur. For the notes of this case we are indebted to Dr. Daniel Brough, resident medical officer.

The patient, a strong, healthy youth, aged nineteen years, was working a winch at the time of the accident. A heavy weight was being lifted and the rope broke. The handle of the winch flew back and struck him on the outer side of the lower part of the left thigh. On his admission to the Royal Albert Hospital, Devonport, it was at once observed, even before the clothes were removed, that the patient had sustained some unusual form of injury to his knee. On undressing him the following condition of the parts was found. The tibia was displaced outwards and slightly backwards. The external and the greater part of the internal articular surfaces of the head could be defined through the skin. The patella was displaced outwards along with the tibia. The leg lay in a semi-everted position and was slightly flexed and abducted. The lower end of the femur formed a large prominent projection on the inner side of the limb. The internal condylar surface, the intercondyloid notch, and the greater part of the external condylar surface could easily be defined through the skin. The edge of the external condyle rested on the edge of the inner articular surface of the head of the tibia. The skin over the internal condyle of the femur was pale and tightly stretched. A slight abrasion of the skin on the outer side of the thigh marked the spot where the blow had been received. The handle of the winch had evidently struck the femur on the external condyle and driven it inwards. No fracture could be detected and there was no swelling or bruising. The dislocation was reduced under an anæsthetic. The head of the tibia returned to its normal position with a double click, the external condyle of the femur first slipping on to the internal articular surface of the tibia and finally on to the external. The patient has since done well and it is remarkable that very little swelling has ever occurred and no bruising.

Remarks by Dr. BROUGH.—Dislocations of the knee are of comparatively rare occurrence. Great violence is necessary to produce the condition owing to the strength of the joint. The above case is of interest because of the simplicity with which the dislocation was brought about and from the further fact that the bones were separated to a greater degree than is generally the case.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Treatment of Separation of the Lower Epiphysis of the Femur.

A MEETING of this society was held on Dec. 13th, Mr. BRYANT, the President, being in the chair.

The PRESIDENT referred to the loss which the society had sustained by the death of Sir William Jenner who was formerly Vice-President and intimated that the council would send a letter of condolence to the members of his family.

Mr. JONATHAN HUTCHINSON, jun., and Mr. H. L. BARNARD communicated a paper on an Improved Method of Treatment of Separation of the Lower Epiphysis of the Femur. They advocated that in all cases of separation of the lower epiphysis of the femur with displacement the treatment with extension of the knee should be given up and they showed by a considerable number of cases with skiagraphic records that it was easy both to obtain reduction and to maintain it by flexing the knee so that the heel touched the buttock. This position was readily tolerated by the patient and after ten days or a fortnight the limb could be put up on a Macintyre splint and subsequently gradually straightened. It was argued that weight extension in the treatment of this injury was quite useless and that the adoption of the full flexion method would not only greatly simplify the treatment, but would lessen the risk of shortening, would secure a better knee-joint, and in some cases might result in saving the limb. Attention was drawn to the disastrous results of compound separation of this epiphysis. Out of 30 collected cases only 6 recovered with a useful limb. The full flexion method was perfectly adapted to compound cases. It was a further development of the plan of treatment on a Macintyre splint flexed to about a right angle and had distinct advantages. It was further maintained that the character of the displacement when the epiphysis was separated was more constant than was generally supposed. The accident occurring when the knee was hyper-extended it was the epiphysis which was nearly always drawn forwards and the diaphysis which projected backwards into the popliteal space. At the same time some rotation or twisting of the leg and corresponding projection of the diaphyseal end was not infrequent. Cases were related in detail illustrating the difficulty of diagnosis and of making certain whether reduction had been properly effected by the old methods and skiagrams were exhibited on the screen proving the persistent tilting forwards of the epiphysis. It was, however, shown that a remarkable moulding and production of new bone occurred in the course of time, so that a much better ultimate result was obtained than might have been expected. Evidence was given that even when some displacement persisted the bone continued to grow in a normal manner. Probably nothing was so likely to damage the epiphyseal disc as prolonged forcible efforts at reduction such as had been recorded in many cases, and Mr. Hutchinson and Mr. Barnard maintained that this risk would be removed by the adoption of the full flexion treatment.

Mr. HUTCHINSON, sen., observed that the paper contained records of a remarkable number of cases of an injury so rare that in twenty-five years' service he himself had never had to treat a single case. The fact that the cases had been drawn from the practice of many surgeons of various hospitals was most gratifying testimony to the harmonious good feeling on such matters which was general at the

present day. The method appeared to be one which would facilitate the treatment of a condition which was admitted by all to be a most difficult one to reduce. But he had some misgiving as to whether it would be equally effective in cases where the separation was complete and the ends of the epiphysis and diaphysis were overlapping. When these surfaces were once brought into good position he thought that the straight position would be sufficient to prevent recurrence of the displacement. The method was an application of that used in reduction of vertical displacement of the patella by acute flexion of the limb. He did not think that the displacement of the lower epiphysis of the humerus was altogether similar as the line of bone involved there was narrow, so that to effect reduction was easy but to maintain the bone in place was difficult. He preferred to put such injuries up in a rectangular splint, holding the diaphysis of the humerus back. If the arm were put up in a position of acute flexion the fragment would be likely to be brought too far forward.

The PRESIDENT said that he had seen a few instances of this rare accident, one as far back as his student days, when injuries of the epiphyses were little known. The older writers entirely dwelt on reduction by extension, but extension alone was often less effective for reduction than manipulation, although it maintained the bones in position when once replaced. Reduction by extension would be impossible in some cases probably because the fragment had slipped through a rent in the periosteum. He thought that the suggestion contained in the paper would prove of the greatest value.

Mr. PEARCE GOULD said that the paper showed the value of skiagraphy which enabled Mr. Hutchinson, jun., and Mr. Barnard to give a convincing demonstration of the accuracy of their contentions and therefore left little room for discussion. The merit of the method lay in its making the fragment retrace its steps just as the head of the femur did in the reduction of dislocations of the hip. He agreed with Mr. Hutchinson, sen., that once the reduction was effected there would be little need to maintain the position of acute flexion.

Mr. A. E. BARKER asked if there was any knowledge as to how long the epiphysis took to unite and if any ill effects had resulted from the maintenance of the position of full flexion for long periods.

Mr. BARNARD, in reply, said that in three of the cases separation had been complete, in one the diaphysis being displaced back into the popliteal space and so low as to be on a level with the head of the fibula. As to the necessity of maintaining the flexed position he quoted a case in which relapse of the displacement occurred when the limb was put up on a Liston's splint, and he thought the method of treating it by simply bandaging it in the position of full flexion with a domette bandage was the simplest, easiest, and most effective. The position caused no discomfort. It should be maintained for a fortnight. Nitrous oxide gas was then administered and the leg was brought down to a right angle and fixed on a Macintyre's splint and extended little by little and finally put up in a plaster case.

MEDICAL SOCIETY OF LONDON.

Transperitoneal Ligature of the Iliac Arteries.

A MEETING of this society was held on Dec. 12th, the President, Mr. EDMUND OWEN, being in the chair.

Mr. BERNARD PITTS read an account of two cases in which he performed Transperitoneal Ligature of the Iliac Arteries. Case 1. Ligature of the Internal Iliac Artery for a Pulsating Sarcoma of the Buttock.—The patient was a man, forty-one years of age, who came under observation in January, 1894, for a pulsating swelling in the right buttock which had first been noticed many months before and had been attributed to a fall. For thirteen months there had been pain down the right leg and latterly numbness as well. When admitted there were signs of pressure on the pelvic nerves, pain along the penis, and incontinence of urine and fæces. The pulsation in the swelling could be diminished by pressure along the iliac crest. The diagnosis lay between pulsating sarcoma and aneurysm and as the signs of pelvic pressure were increasing ligature of the internal iliac artery was decided on. The abdomen was opened in the middle line, the intestine held aside with hot sponges, and an incision made through the peritoneum in the middle line posteriorly. There was some difficulty in reaching the artery as it took an abnormal course. He ligatured it with a gold-beater's skin ligature. There was some diminution in the pulsation of the tumour after ligature which was thought to indicate that it was aneurysmal. On the sixtieth day spontaneous fracture of the right femur occurred and a tumour could be felt in connexion with the liver which left no doubt that it was a sarcoma. Five months after the ligature the right lower limb was amputated and the femur was found to be affected with a small-celled sarcoma invading the medullary cavity. Six months later he was seen very much improved in his general health and able to give some attention to his business. The gluteal tumour and that connected with the liver, however, were larger. A year later he died, the death being attributed to "congestion of the lungs." Mr. Pitts remarked that the ligation of the artery certainly appeared to check the rapidity of the growth. In operating he recommended that the surgeon should first find the common iliac artery and then trace the internal iliac artery. Case 2. Ligature of the Common Iliac Artery for Recurrent Hæmorrhage from a Pelvic Abscess.—The patient was a young man who had had good health till the age of fourteen years when he had a severe boil of the neck, followed by pleurisy and the formation of an abscess (in 1887) in the right lumbar region. He apparently got well and then had an abscess near the insertion of the right deltoid muscle. He remained well for some years except for obstinate constipation. In 1894 he began to complain of pain down the leg and some months later of tenderness in the groin. In July, 1896, the symptoms pointed to trouble round the appendix and there was definite discharge of pus from the rectum which gave great relief for a time, but the symptoms recurred and Mr. Pitts made an incision above the right loin, liberating a small quantity of pus, which was thought to be due to bone trouble. The appendix was found to be healthy. There was a long sinus, but no bone could be felt. In October, 1896, there was swinging pyrexia which disappeared when the sinus was efficiently drained. A short time later there was profuse hæmorrhage from the sinus and as this recurred several times to a dangerous extent Mr. Pitts decided to ligature the internal iliac artery. He operated as in the former case, but the internal iliac artery was surrounded by so much inflammatory matting that he tied the common iliac, using a floss silk ligature. The incision healed well and circulation soon became re-established. The wall of the abscess necrosed and then healed with great rapidity. In December, 1897, an abscess pointed at the lower part of the incision and after a few days the silk ligature was discharged. At the present time the patient was in robust health. Mr. Pitts thought that the original mischief must have been tuberculous disease connected with the lumbar vertebræ. As regards the mode of tying the ligature he believed that the "stay knot" suggested by Mr. Ballance and Mr. Edmunds was the best.

The PRESIDENT congratulated Mr. Pitts both on his paper and on his conduct of the cases. He wondered whether the second case might not have been one of latent septic disease. He asked why gold-beaters' skin had been used in the first case. He himself did not see that it had any advantage over silk which could always be obtained. He asked whether the medullary growth in the femur was supposed to be secondary to the pelvic growth. The case would encourage the surgeon not to wait unduly till the diagnosis between sarcoma and aneurysm was made with certainty as the sarcoma seemed to have been checked by the ligation of the artery.

Mr. HARRISON CRIPPS remarked that a transverse incision of the abdominal wall should be avoided wherever possible as it was almost impossible to avoid the occurrence of a hernia when it was adopted. As to the kind of ligature he preferred to use a smaller size than Mr. Pitts had employed, such as a No. 2 silk ligature. In ligaturing the stump of an ovarian tumour he used fine silk. He did not think that if the tumour were known to be a sarcoma it would be prudent to ligature the large arteries. In operating in one case, that of a stout man, sixty years of age, for the relief of an aneurysm of the size of a cocoanut in the groin he opened the abdomen along the left border of the left rectus muscle. He attempted to reach the artery through an incision on the inner side of the descending colon. Owing to the amount of fat on the abdominal wall he was not able to reach it, but did so with ease by making his incision through the peritoneum on the outer side of the gut.

Mr. MARMADUKE SHEILD thought that the second case

was most likely one of chronic pyæmia such as had been described by Sir James Paget. If it had been tuberculous he thought it unlikely that his general condition would have improved so much after the operation. Possibly the infection was from the boil in the neck. He mentioned the case of a man who had antral disease supposed to be due to influenza in whom a year later there was suppuration in the glands and other structures in the neck. No tubercle bacilli could be found, but there was abundant growth of staphylococcus aureus. The latency of organisms in the tissue was remarkable and was often well seen in the case of deep-seated mammary abscess. He had long ago advocated reaching the iliac vessels in the way successfully carried out by Mr. Pitts. As regards the material of the ligature he preferred a soft ligature and thought that silk was more satisfactory than catgut or kangaroo tendon.

Mr. BALLANCE observed that in 1890 he and Mr. Edmunds had fully described this mode of operating. He asked why Mr. Pitts incised the peritoneum in the middle line behind instead of along the line of the artery. He thought that on the whole soft silk was the best material for ligature, which should not be too fine or it cut through the coats. He found gold-beaters' skin which was prepared from the peritoneum of the ox another excellent material for ligatures. It could be obtained from Messrs. Macfarlane made up as ligatures in a round and supple form. A ligature of the same size as No. 4 silk would last 150 days in the body. In the Museum of St. Thomas's Hospital there were two specimens of ovarian pedicles. In the first, eighteen months after operation, all the ligature except the knot had been absorbed, and in one three years after the whole ligature had disappeared.

Dr. JOHN BRUNTON observed that silk ligatures were often adulterated with jute which could be distinguished by its woody odour when burned and by its microscopical appearances.

Dr. LYNDON said that the second patient had been under his care for the last eighteen months. He thought that the case was one of tuberculosis, although when there was discharge of pus at the time of the extrusion of the ligature he failed to discover tubercle bacilli.

Mr. PITTS, in reply, said that he was strongly in favour of the view that the case was tuberculous. He did not know of cases where septic material remained dormant for so many years with only short periods of activity. He thought that the patient's present robust condition was quite compatible with his having recovered from a tuberculous affection. He did not find any objection to the use of silk ligatures and preferred not to have them too fine in order to avoid injuring the coats of the artery. He still thought that a median incision was best for reaching the vessels if they were in their normal position. He had no doubt that the tumour in the femur was a secondary deposit.

CLINICAL SOCIETY OF LONDON.

Chancre.—Pancreatic Calculi.—Acute Hæmorrhagic Pancreatitis.

A MEETING of this society was held on Dec. 9th, Mr. LANGTON, President, being in the chair.

Mr. CAMPBELL WILLIAMS read a paper on a case of Lingual Chancre from Indirect Contagion which tended to show that the virus of syphilis could remain active in the dried state for over two months. The vehicle for the dried virus was the mouthpiece of a set of bagpipes which had been played upon by a syphilitic subject and then put away for two months, when the owner used them and developed a hard sore of the tongue and the usual secondary syphilitic sequelæ, the chancre appearing either twenty or thirty days after the presumptive infection. The only other solution of more recent exposure to some other source of infection was strenuously denied. The history of the case was in favour of the patient's statements and condition.—Mr. CLEMENT LUCAS said that the details appeared to be too exact to allow of doubt as to the correctness of the explanation. There was no more improbability in the preservation of dried syphilitic virus than of dry vaccine virus on the old ivory points. He mentioned the case of a man, nearly sixty years of age, in whom a chancre occurred on an abrasion of the tongue caused by a dental plate and in which he believed the infection to have been accidental through a tumbler or pipe contaminated by some syphilitic person.—Mr. CAMPBELL WILLIAMS, in reply, mentioned another case in which a patient had a chancre on a pimple over the trochanter almost certainly caused by infection from the seat of a closet.

Mr. A. PEARCE GOULD read a paper on a case of Pancreatic Calculi one of which obstructed the bile-duct. The patient was a man, forty-six years of age, whose only previous illness was influenza four years before. In September, 1895, he noticed some failure in health and in November he suffered for a few days from severe pain referred to the umbilicus, chiefly felt on walking up hill. He became jaundiced and this persisted until February, 1896, when he came under observation. The liver was then enlarged nearly down to the umbilicus and the gall-bladder could be felt distended as a cylindrical swelling in the right lumbar region. There was no ascites. The motions were of a clay colour. On Feb. 14th Mr. Gould explored the abdomen through a vertical incision to the right of the rectus muscle. Half a pint of fluid was drawn off from the gall-bladder by aspiration. A lump was felt at the back of the small omentum which proved to be a coral-like stone in the dilated duct of Wirsung and other smaller calculi were found and removed. The operation did not relieve the obstruction to the flow of bile and on March 3rd the patient had an attack of agonising pain in the right hypochondrium. Mr. Gould re-opened the abdomen and with some difficulty was able to feel a stone in the head of the pancreas close to the duodenum which he removed by incising the pancreas from the front, and he was then able to pass a probe through the duct into the duodenum. Soon after the operation the patient vomited bile, the stools became coloured, and bile ceased to flow from the incision in the gall-bladder. Notwithstanding vomiting persisted and he died from exhaustion the twelfth day after the second operation. Post mortem a little pus was found underneath the gall-bladder and also behind the ascending colon. The pancreatic duct was found to be dilated and ulcerated. There was a hydatid cyst at the back of the liver. The calculus was composed of phosphate and carbonate of lime.—Mr. T. H. KELLOCK mentioned a case which was under the care of Dr. Ord at St. Thomas's Hospital some years ago. A man, aged fifty-six years, was seized with acute abdominal pain followed at once by jaundice. Two weeks later there was a second attack. When admitted he was extremely jaundiced and the liver reached from the third rib to below the costal margin. On the tenth day he had a rigor followed by severe pain in the right hypochondrium and three days later he passed a small concretion. The jaundice became less marked after the passage of the calculus but he became exhausted and gradually sank. Post mortem the liver was found to be enlarged and the gall-bladder was dilated. Embedded in the head of the pancreas in a dilated portion of the duct was another calculus of the size of a cherry-stone.—The PRESIDENT remarked that jaundice was one of the most patent features in Mr. Gould's case and asked how close the calculus was to the opening of the duct.—Mr. GOULD, in reply, said the stone lay in a cavity half an inch before the union of the ducts and would press on both. That it caused the jaundice was shown by the passage of bile at once after its removal and the disappearance of the jaundice.

Mr. A. D. FRIPP and Dr. J. H. BRYANT related a case of Acute Hæmorrhagic Pancreatitis. The patient was a man, aged forty-two years, admitted to Guy's Hospital on Sept. 18th, 1898. He was seized with pain two days before and was admitted in a state of collapse. The pain was chiefly above the umbilicus. An exploratory laparotomy was performed at once. No obstruction was found. There was a good deal of blood-stained peritoneal fluid; the omentum had a shotty feel, but no necrotic nodules were found. There was extreme contraction of the small intestine in places. The abdomen was closed and the patient died forty-eight hours later. The necropsy was performed eleven and a half hours after death. The abdominal wall was very thick owing to the great increase of subperitoneal and subcutaneous fat. The omentum was large and thick. Extensive fat necrosis was found in the omentum, mesocolon, fat around the pancreas, and the subperitoneal fat both visceral and parietal. There was extensive hæmorrhage into the fatty tissue around the pancreas in the gastro-splenic omentum. The pancreas was of about twice its normal size; it was of a dull, dark, purplish colour, and on section appeared to be infiltrated with blood. Patches of fat necrosis were also visible in the interlobular tissue of this organ. The stomach, duodenum, and the rest of the intestine presented a normal appearance except for a little ecchymosis around the cardiac orifice of the stomach. The heart weighed 13 oz.; the valves and

blood-vessels were normal in appearance. On microscopic examination the most striking changes noticed in all the sections was the enormous amount of blood present, which could be seen in large quantity beneath the capsule of the pancreas, in the interstitial tissue between the lobules, between the acini themselves around the ducts, and in the fat cells and intercellular spaces of the peri-glandular connective tissues. A good many patches of fat necrosis were seen in the interlobular and peri-glandular tissues. The glandular acini immediately adjacent to these areas were in various stages of necrosis and beyond these again the cells of the acini showed cloudy swelling and their nuclei were faintly stained and indistinct. Apart from these areas there was very little evidence of any parenchymatous inflammation, the nuclei and protoplasm of the cells staining well with the various reagents. The pancreatic ducts were not obstructed; the cells presented a normal appearance. In the fibrous tissue of, and around the, ducts a good deal of blood was seen. The fat necrosis presented the usual features characteristic of that condition. Sections stained with methylene blue showed a few rod-shaped bacilli in the blood throughout the organ. There were no bacilli in the pancreatic ducts. Sections of the nerves and ganglia from the pancreatic duodenal plexus were examined, but nothing abnormal was found. Cultivations were taken from the centre of the body of the pancreas with strict precautions to prevent the possibility of any accidental contamination and a pure culture of the bacillus coli communis resulted. The pathological process in this case appeared to be a primary acute interstitial inflammation associated with the presence of the bacillus coli communis and characterised by extensive hæmorrhage as stated above and by secondary necrosis and inflammation of the parenchyma in the immediate vicinity of areas of fat necrosis. The distribution of the bacilli suggested the blood-vessels as the probable channel of infection. Two other cases were mentioned in which bacteriological examinations were made by Mr. Pakes, demonstrator of bacteriology at Guy's Hospital, the bacillus coli communis being obtained in pure culture from the pancreas in both instances. A similar fully reported case by Dr. Moore[1] was referred to in which a pure culture of the bacillus coli communis was also obtained and in which the channel of infection was thought to be the lymphatic spaces. (Microscopical specimens were shown demonstrating the above-mentioned observations.)

Dr. NEWTON PITT and Mr. JACOBSON communicated a paper on Five Cases of Acute Pancreatitis. Case 1. Acute Hæmorrhagic Pancreatitis.—A man, aged forty-two years, temperate, had three attacks of severe abdominal pain with vomiting, each lasting about an hour, in August and September, 1898. On Nov. 12th he had another attack of intense pain with vomiting and constipation. The pulse was 120 and the abdomen was rigid. On the 14th he had severe diarrhœa, his temperature was 100° F., and there was a swelling in the upper part of the abdomen. He was seen by Dr. John Young of Stamford Hill who took him to Guy's Hospital. The man was extremely ill and difficult to examine. A retro-peritoneal tumour with impaired resonance was found above the umbilicus, the motions were normal in colour, but the man was so ill that it was thought better to defer any operative interference. On examination the urine was found to contain albumose; there was marked leucocytosis (22,500 per cubic mm.), and the tumour lay behind the stomach pushing forward the duodenum and greatly distending the former. The evidence pointed to a pancreatic cyst or an abscess in connexion with either pancreas, gall-bladder, or gastric ulcer, or a rapidly growing sarcoma. As the tumour was increasing in size Mr. Jacobson decided to open the abdomen and found extensive fat necrosis and a tumour with the lesser omentum, intestines, and stomach matted to it. The oozing from every part when disturbed was excessive and the firm feel of the mass prevented any radical treatment. The abdomen was closed and the patient died next day. Post mortem there was found an abscess cavity some 4 in. across, in front of which was the stomach and lesser omentum and behind lay the sloughy pancreas. Case 2. A Retro-gastric Pancreatic Abscess.—A middle-aged woman was seen by Dr. Pitt some years ago for intense abdominal pain and vomiting. She was found to have a large abscess behind the peritoneum pointing in the right loin where it was opened. Most of the pancreas had disappeared; the abscess occupied its site. It was now clear this was a case of acute pancreatitis. Case 3. Acute Hæmorrhagic Pancreatitis.—A woman, aged seventy years, was seen by Mr. Fuller of Streatham on Oct. 16th, 1898, for intense epigastric pain with sickness and collapse occurring after an unusually good breakfast. The pain was not relieved by the vomiting. There was a constant desire to defecate, which was not relieved by an enema which brought away a constipated motion containing particles of fat. There was slight tympanites which steadily increased until death, forty-eight hours later. The patient was said to have had a similar attack eighteen months previously. At the necropsy acute hæmorrhagic pancreatitis was found, with fat necrosis of the omentum. Case 4. Acute Suppurative Pancreatitis.—The patient was a man, aged fifty-three years. He was an alcoholic. On Nov. 12th, 1863, at 2 A.M. he took a draught of cold water; at 3 A.M. he was seized with intense epigastric pain with vomiting. The symptoms subsided on the 17th. On the 24th a pulsating tumour imperfectly resonant on percussion was noticed above the umbilicus; this became less distinct in the knee-elbow position and the pain ceased. The vomiting returned at the end of January and he died on February 8th from exhaustion. At the necropsy it was found that the omentum formed a black puckered mass; the stomach was greatly distended; the lesser sac of the omentum contained a well-defined abscess above and behind the stomach. The greater part of the pancreas was healthy, but some distended ducts communicated with the abscess. Case 5. Acute Necrotic Pancreatitis.—A man, aged sixty years, had had severe abdominal pain and vomiting for three months, the attacks recurring every three or four days. For four years he had had attacks of gastric pain from time to time. On admission under the care of Dr. Habershon there was a tender pulsating tumour in the upper part of the abdomen. The patient vomited frequently and died from exhaustion. At the necropsy some early peritonitis was found; a minute opening was also found in the meso-colon leading to an abscess cavity behind the stomach and filled with a brown fluid. At the posterior part of the abscess 2½ in. of necrotic pancreas was found. There were numerous nodules of yellow concrete matter in the wall of the cyst (probably fat necrosis).—The PRESIDENT related a case in which the symptoms might have been due to a milder form of the same disease. A man, fifty years of age, was seized with umbilical pain and afterwards a tumour formed extending from the ensiform cartilage to the umbilicus. Vomiting and diarrhœa were present and the patient wasted rapidly. Ascites was present but after the fluid was removed by aspiration it did not return. The tumour could be felt much more distinctly after aspiration and three weeks later the abdomen was explored. A cystic tumour was found behind the stomach which Mr. Langton aspirated and five pints of blood-stained fluid were drawn off. The cyst evidently involved the pancreas. The patient made a fair recovery but died suddenly from intestinal hæmorrhage two years later. Post mortem the pancreas was found to be nearly entirely destroyed and then it was also found that the cicatrix of the contracted cyst had involved the portal vein, thus accounting for the hæmorrhage.—Mr. BOWLBY said that several causes of this condition were recognised—injury, infective inflammation, and he thought probably embolism. The sudden onset and the necrotic state of the pancreas would be explained by such a causation. He asked if the condition of the pancreatic artery in this case had been investigated. He mentioned a case in which a woman, aged forty-one years, was suddenly seized with symptoms pointing to intestinal obstruction. He opened the abdomen 48 hours later but found no obstruction. The omentum, however, was dotted over with areas of fat necrosis. The pain was relieved by laparotomy but on the third day she suddenly became delirious and died comatose. Although there was no necropsy he had little doubt that she suffered from acute pancreatitis.

[1] Medical Chronicle, August, 1898.

OBSTETRICAL SOCIETY OF LONDON.

The Development of the Graafian Follicle.—Uterine Fibroids.—Congenital Tumour at the Internal Os causing Hydrometra.—Incarcerated Ovarian Dermoid Tumours during Pregnancy,—Placenta Prævia and Fibroids.—The Actions and Use of Forceps.

A MEETING of this society was held on Dec. 7th, Dr. C. J. CULLINGWORTH, President, being in the chair.

Dr. HUNTER gave a demonstration of specimens illustrating the Development of the Graafian Follicle and exhibited a series of ovaries preserved in formalin in which the colours were well maintained.

Dr. LEWERS showed (1) a large Solitary Subperitoneal Fibroid Tumour of the Uterus (9½ lb.) successfully removed by laparotomy with intra-peritoneal treatment of the stump; (2) a Uterus with Multiple Fibroids (8 lb.) successfully removed by supravaginal hysterectomy with intraperitoneal treatment of the stump. He said that as regards the history, symptoms, and signs cases of large solitary subperitoneal fibroids differed remarkably from the common cases where the uterus was the seat of multiple fibroids. In the first case the patient, married ten years, had had five children and two miscarriages, the last ten months prior to operation. Menstruation had never lasted more than two days and for ten months prior to operation there had been complete amenorrhœa. The uterus was in no way deformed except at the place where the tumour was attached and the cavity was of normal length. In the second case the patient, married five years, had not been pregnant. Menstruation was profuse and there had been constant metrorrhagia for three months before operation. The uterus was deformed and the sound passed 7 in. or 8 in.

Dr. HERBERT SPENCER read a short communication on three cases of Congenital Tumour at the Internal Os Uteri causing Hydrometra in Newly-born Children. Two of the specimens had been briefly described in the catalogue of the gynæcological specimens in University College Museum published in 1891 and were, as far as he was aware, the first recorded instances of the occurrence of this tumour. The tumour was a small sessile, pea-like body situated at the summit of the anterior median column of the cervical arbor vitæ and gave rise to dilatation of the cavity of the body by obstructing the outflow of mucus. Dr. Spencer thought the tumour might later in life produce pain at menstrual or at other times and might perhaps explain the occurrence of certain polypi at the internal os uteri which were furnished with glands lined with several layers of epithelium—a condition which he had met with in this situation in newly-born children. He directed attention to a recent publication by Dr. Friedländer[1] on a similar condition in young girls.

Dr. HERBERT SPENCER showed a small Multilocular Dermoid Tumour of the Right Ovary which being incarcerated in the pelvis he had removed by laparotomy at the fourth month of pregnancy. Pain which had been present before the operation at once ceased on removal of the tumour and the patient had five months later been successfully delivered of a living child at full term.

Dr. HERBERT SPENCER also showed for another practitioner a small Ovarian Dermoid Tumour which had been incarcerated in the pelvis at the time of labour. Forceps and afterwards version had been employed with the result that the tumour was ruptured and the patient died from septic peritonitis three days after delivery.—Dr. JOHN PHILLIPS said that he had met with a case in which the cyst had obstructed labour and necessitated its incision and suturing to the vaginal walls before delivery could be effected. A year later the patient was seized with a rigor and abdominal pain and at the operation a large suppurating dermoid cyst was found with a coil of hair adherent to the old scar in the vagina. The patient made a good recovery. Dr. Phillips had recently had an impacted dermoid complicating early pregnancy which had been successfully removed.—Dr. GILES mentioned a case of an ovarian dermoid removed during pregnancy. He first saw the patient when she was three months pregnant and decided to wait and see whether with the progress of pregnancy the cyst would rise out of the pelvis; as this did not happen the cyst was removed by abdominal section and the patient was expecting her confinement shortly.

Dr. BOXALL showed a Uterus with Interstitial Fibroids from a case of placenta prævia centralis. The patient died forty minutes after delivery from acute and post-partum hæmorrhage. In her previous confinement three years ago a large fibroid was noticed in the lower pole of the uterus on the left side and an abscess formed and burst into the vagina, the sinus in which still remained. The fibroid had shrunk considerably since the previous labour.

A paper by Dr. PONDER on the Actions and Use of Forceps gave rise to some discussion.

[1] Archiv für Gynäkologie, 1898.

OPHTHALMOLOGICAL SOCIETY.

Renal Retinitis.—Sympathetic Ophthalmia beginning fourteen days after Excision of the Injured Eye.—An Unusual Form of Marginal Keratitis.—Pulsating Exophthalmos with Visible Tumour.—Symmetrical Choroiditis in the Early Stage.—Atrophy of the Choroid with Sclerosis of the Choroidal Vessels.—Myxo-sarcoma of the Orbit.—Congenital Absence of the Choroid.—Tumour of the Iris.—Injury to the Cornea.

A CLINICAL meeting of this society was held on Dec. 8th, Mr. H. R. SWANZY being in the chair.

Mr. NETTLESHIP showed a microscopical drawing of Renal Retinitis. Pigmentation of the retina was known to occur in cases of renal retinitis where the disease was either severe or of long standing; it was generally seen near the periphery, but if the case lasted long enough it was also found near the disc. The case from which the drawing was taken had been observed during life and the pigmentation had been noted. After death the eyes had been examined. A number of oval or round cells, with amorphous débris the remains of an inflammatory exudation, were found in the retina between the bacillary layer and the hexagonal pigment layer in different places; these foci contained pigmented cells derived from the pigment epithelium, probably by proliferation.

Mr. HOLMES SPICER showed a case of Sympathetic Ophthalmia beginning Fourteen Days after Excision of the Injured Eye in a boy, aged ten years, who was struck in the left eye on July 4th by a piece of sardine tin; there was a jagged wound of the cornea not involving the ciliary region; the anterior chamber was filled with blood and the deeper parts could not be seen. A week later, July 12th, a piece of entangled iris was removed from the wound by iridectomy; the lens was found to be wounded. The eye remained painful and much congested and iritis set in and it was excised on July 25th, three weeks after the injury. The patient remained in hospital till August 6th. Two days later there was slight ciliary injection of the right eye. Fourteen days after excision he was taken into hospital again. Tension was − 2, and the vision equalled $\frac{6}{36}$; the pupil was well dilated; there was no deposit on the back of the cornea; there was much floating matter in the anterior part of the vitreous; there was no optic neuritis. He was treated with atropine and mercurial inunction. The tension had now become normal and the vision was $\frac{6}{9}$.

Mr. JOHN GRIFFITH and Dr. C. S. BLAIR showed a case exhibiting an Unusual Form of Marginal Keratitis. The condition had existed for several years and was associated with eczema of the face; the keratitis was symmetrical, attacking the inner and outer margins of each cornea close to the limbus. The lesions were slightly raised, vascular, and in three out of four limited by a curved line of opacity. It bore some resemblance to phlyctenular keratitis, but its persistence, absence of ulceration, and want of symptoms excluded this disease. It resembled spring catarrh, but the palpebral conjunctivæ were quite healthy.

Mr. W. J. CANT showed a man, aged thirty-six years, having Pulsating Exophthalmos with Visible Tumour who was kicked on the outer part of the left eyebrow eight years ago. Eighteen months ago he had pain over the right eyebrow with vomiting; the sight became dim and he had diplopia. Gradually a swelling appeared at the upper inner angle of the right orbit and he was conscious of a loud whistling sound in the head; as the swelling increased the sight returned and the diplopia ceased. The vision of the right eye equalled $\frac{6}{9}$ and Jaeger 1, and there was proptosis to the extent of 8 mm. There were large tortuous veins on the ocular conjunctiva and a pulsating moveable tumour diminished by pressure on the carotid; a loud bruit could be heard over the region of the tumour. There was no diplopia; the pupil acted normally; the retinal veins were enlarged, tortuous, and pulsating. He had been treated with rest, low diet, iodide of potassium, and digital compression with considerable benefit.

Mr. HARTRIDGE showed a man, aged twenty-three years, with Symmetrical Choroiditis in the Early Stage who first had dimness of sight five months ago; the sight had been progressively failing since. The family history and the personal health were good and there was no history of syphilis. The vision of the right eye equalled $\frac{6}{12}$ and of the left $\frac{6}{18}$. Both optic discs were swollen and blurred; there was a large choroidal hæmorrhage on the outer side of each

disc and œdema of the retina over the whole central region, with a number of small circular exudations in the superficial layers of the choroid; the urine was normal.

Mr. ERNEST CLARKE showed a man, aged fifty-three years, exhibiting Atrophy of the Choroid with Sclerosis of the Choroidal Vessels who first attended the Central London Ophthalmic Hospital four years ago with the history that his sight had been gradually failing for a year. He had been a heavy drinker and had had syphilis. He had well-marked optic neuritis in both eyes and vision was reduced to perception of fingers at a metre in both eyes; there was no history of night blindness. The following changes had been gradually coming on since then and the present condition of the eyes was as follows: atrophy of the optic nerve and retina, atrophy of the epithelial pigment and of the chorio-capillaris, which allowed the vessels in the tunica vasculosa to be well seen; sclerosis of many of the choroidal vessels, especially on the temporal side of the posterior pole of each eye. The periphery of the retina showed pigmentation like that of retinitis pigmentosa. There were large flocculent vitreous opacities. Vision was reduced to perception of light.

Mr. JULER showed a case of Myxo-sarcoma of the Left Orbit in a woman, aged twenty years, with microscopic sections and photograph. The patient had always been healthy till May, 1897, when diplopia set in. In February, 1898, the left upper lid began to droop and the eyeball seemed to be turned downwards and pushed forwards. Since then the globe had been gradually displaced downwards, forwards, and outwards. At the time of admission to the hospital (June 15th, 1898) there were marked ptosis and proptosis, the globe protruding about 2 cm. forwards and 3 cm. downwards and slightly outwards. The movements of the globe were greatly limited. The tumour caused bulging of the upper lid; it was softish and semi-fluctuant; about the centre could be felt a rather hard nodule and another towards the inner portion. The cornea was hazy, but the fundus appeared to be normal. The conjunctiva was congested. Vision was reduced to perception of fingers. The skin of the face was sprinkled with brown and blue pigmented spots. These the patient asserted had always existed. The tumour was removed on June 25th with the whole contents of the orbit. Before removal a trocar and cannula were inserted into the depths of the tumour and gave exit to several drachms of clear, gelatinous-looking fluid. Incision into the tumour discovered a cyst in its midst. After removal of the orbital contents the bone at its roof was found to be corroded and an aperture extended to the dura mater. Hæmorrhage was stopped by thermo-cautery and plugging with antiseptic gauze. The patient made a good recovery without constitutional disturbance and was discharged on July 29th. She progressed favourably and without pain until November when she noticed a slight swelling beneath the upper lid. This increased in size and she came back on Dec. 8th presenting a hard, nodular, thickened growth beneath the upper lid which was evidently fixed to the roof of the orbit and blocking up the whole orbital cavity. The tumour had been examined microscopically by Mr. John Griffith and Mr. Juler who considered that it presented the characteristics of a benign myxoma, being composed of stellate cells branching and anastomosing in all directions, round cells, and blood-vessels. Within the stroma mucin was held as water within a sponge. The lacrymal gland was enlarged and infiltrated in places with round cells, either inflammatory or sarcomatous. The muscular fibres were swollen and split transversely, as in Zenker's degeneration. A piece of skin containing one of the blue spots showed only collections of pigmented cells clustered around the hair follicles in the true skin. The microscopic examination of the tumour alone would have led to the hope of perfect recovery after its complete removal. The fact, however, of the frontal bone being corroded and even perforated prevented more active operative interference and rendered recurrence more than probable. With regard to the future treatment of the recurrent growth Mr. Juler could not speak favourably as the frontal bone was certainly infiltrated and the sarcoma had probably already invaded the dura mater and frontal lobe of the brain.

Dr. TATHAM THOMPSON showed a man, aged eighteen years, exhibiting Congenital Absence of the Choroid. The vision equalled $\frac{2}{200}$. Examination by the ophthalmoscope showed a dazzling white sclera all over the fundus except at the macula; there were a few isolated choroidal vessels only.

Mr. A. H. THOMPSON showed a small Tumour, probably a Sarcoma, projecting from the anterior surface of the iris.

Mr. W. H. JESSOP showed a case of Injury to the Cornea. A large flap turned back from the upper margin of the cornea had become re-applied and united.

BRITISH GYNÆCOLOGICAL SOCIETY.

Pelvic Surgery.—Exhibition of Specimens.

A MEETING of this society was held on Dec. 8th, Dr. H. MACNAUGHTON-JONES, President, being in the chair.

Mr. E. STANMORE BISHOP (Manchester) read a paper on the Combined Abdominal and Vaginal Section in certain cases of Pelvic Surgery. The first case was that of a woman, aged twenty-eight years. With her second child she had a premature labour due to fright followed by severe hæmorrhage. She had a miscarriage two years ago, followed by persistent bleeding. Two months ago she had smart bleeding with excessive pain on the left side which was becoming more acute. There was a small firm mass in the ovarian region which was very tender. It was removed by combined operation, it being too firmly fixed to be brought down per vaginam. It adhered by omentum to the pelvic brim. The patient recovered. The second case was that of a woman, aged forty-six years. Her second child was born twenty-two years ago. Menstruation since then had been irregular and profuse, the quantity increasing. Sacral and hypogastric pain was also increasing. She had been bedridden for fourteen months. There was double pyosalpinx. It was removed by combined operation because even after complete division of the uterus per vaginam the parts were too rigid to allow of their being drawn down. On abdominal section two large pus sacs were found with adherent intestine. The patient recovered. The third case was that of a woman, aged twenty-nine years. She had had no pregnancies. There was a history of scarlet fever. She caught a chill during menstruation. She had had no period for fifteen months, had had loss of flesh for twelve months, had been bedridden for ten months, and had had night sweats for nine months. Her left leg was fixed in flexion. It was œdematous. There was double pyosalpinx. It was removed by combined operation because the parts were too fixed, even after total section of the uterus, to allow of their being drawn downwards. On abdominal section the small intestine was found to be adherent to the tube, bladder, and iliac fossa. The right ovary was found—a thick-walled abscess—separate from the rest and embedded in adhesions in the right iliac fossa. The patient died. The fourth case was that of a woman, aged thirty-nine years. She had had several miscarriages and no full-time pregnancies. She had increasing menorrhagia and metrorrhagia. There was much pain. The uterus was enlarged to the size of six months pregnancy; it was partly soft and partly intensely hard. The uterine canal was elongated and a fibroid tumour was found. It was removed by combined operation because the patient being very anæmic it seemed advisable to render the operation as bloodless as possible by tying the uterine arteries at the earliest possible moment and by doing most of the work from below to shorten the time during which the peritoneum should be open. When this was done abdominal section was performed so as to shorten as much as possible the entire duration of the operation. These cases were selected because each illustrated some points in the question under discussion. Thus the first case showed the difficulty which sometimes arose in the removal of even a small tumour through the vagina when it was adherent above and there was no justification for removal of the uterus. The second case showed that even when the uterus could be removed with the tubes there might still be great risk in doing this through the vagina alone when intestinal adhesions were present. The third case showed the impossibility in some cases of removing all foci of suppuration without the double attack, whilst the fourth case illustrated the advantage gained in an operation intended to be finished by abdominal cœliotomy by performing the earlier steps per vaginam—advantages in time and in minimisation of shock. Mr. Stanmore Bishop proceeded to review the advantages of abdominal and vaginal cœliotomy and their several disadvantages. He pointed out that many of the disadvantages originally present in the abdominal operation had now been eliminated by improvements in position, technique, &c., whilst the vaginal

operation, which at first appeared to avoid all these, was unsuitable in certain cases and had certain dangers of its own. He emphasised, however, certain marked advantages which it undoubtedly possessed. He advocated the combination of both methods in some cases in which it was impossible or inadvisable to finish the operation from below and deprecated the "morcellation" recommended by Landau. This manœuvre, he suggested, should not bear the same name as that of the older operation, devised by Péan and designed for the removal of single fibroids per vaginam, through the dilated os, which left the uterus intact and useful. He advised it also in cases which must be finished through the abdomen in order to diminish the amount of shock. He invited the society to define the limit beyond which the vaginal attack should not be carried.

Dr. HERBERT SNOW observed that in only one of Mr. Bishop's cases was the combined method deliberately adopted; in the other 3 it was done as a matter of necessity and he thought most of the Fellows would feel that in these 3 cases it would have been better to begin by the abdomen. He did not agree with Mr. Bishop that mere laparotomy meant much shock; most of the cases originally described as shock were really cases either of concealed hæmorrhage or of septic peritonitis. He doubted if any advantage of the combined method would compensate for the drawback of proceeding to laparotomy after the hands had become soiled with pus and mucus in the vagina.

Mr. MAYO ROBSON (Leeds) thought it was best to make up one's mind beforehand which route to adopt; at the same time every operator ought to be prepared to follow up one route by the other. His experience was that it was only rarely necessary to complete by the abdomen an operation begun by the vagina. As a rule, in a case of hysterectomy if he found that he could not bring the uterus down he would prefer not to operate at all, for in such cases life was probably not prolonged. For most cases he preferred the abdominal route.

Mr. BOWREMAN JESSETT agreed with the previous speakers that it was better to determine beforehand which route to adopt, but this was not always possible except under anæsthesia. If such an examination showed that there was much fixation, he thought it better to proceed at once to laparotomy.

Mr. J. W. TAYLOR (Birmingham) pointed out that there were two distinct questions in the paper: (1) the combined method in the treatment of myoma; and (2) the same in the treatment of inflammatory conditions. For myomata the operation was a valuable one because it was often safer to secure the uterine arteries through the vagina as the first step, and also the duration of the operation was thereby shortened. In inflammatory conditions they did not yet know how much could be done by the vagina but were still learners.

Mr. J. FURNEAUX JORDAN (Birmingham) approved of the combined method for hysterectomy for the reasons given by Mr. Taylor and also because the work done by the vagina was extra-peritoneal. Most other cases could be dealt with by one or the other route and he agreed that in such cases it was better to decide beforehand which to adopt. He had done about 10 vaginal cœliotomies; in 1 he had to open the abdomen after all, but in most cases a careful diagnosis beforehand would obviate this necessity. For inflammatory conditions the abdominal route was usually the best, but pyosalpinx operated on by laparotomy had such a high mortality that some palliative vaginal procedure was often better.

Dr. MACPHERSON LAWRIE (Weymouth) thought the cases requiring the combined method must be few and far between.

Dr. HEYWOOD SMITH questioned whether Mr. Bishop's contention that the combined method was quicker would be found generally true.

Dr. PURCELL stated that the double method originated with Martin who was, however, so unfortunate in his early cases that he gave it up.

Dr. ARTHUR GILES remarked that the *raison d'être* of the vaginal operations was to obviate the necessity of opening the abdomen. There was nothing which was done by the combined method that could not be done by the abdominal alone.

The PRESIDENT said that Mr. Bishop was forced to the consideration of the combined method by cases in which operation had been too long delayed. He should have felt inclined to operate through the abdomen in the first instance in these cases. The society was much indebted to Mr. Bishop for his paper which dealt with some of the most recent work in gynæcology.

Mr. STANMORE BISHOP briefly replied.

The following specimens were shown:—

Mr. CHARLES RYALL: (1) Myoma Uteri complicated with distended tube and broad ligament cyst; and (2) a Large Fallopian Tube.

Dr. MACPHERSON LAWRIE (Weymouth): (1) Fibroid Uterus removed by Subperitoneal Hysterectomy; and (2) Fibroid Uterus undergoing malignant degeneration.

Mr. J. W. TAYLOR (Birmingham): (1) Small Myoma removed from the fundus after anterior colpotomy and division of the uterus; (2) two small Ovarian Cysts, each removed by posterior colpotomy; and (3) Tubal Mole with right Fallopian Tube removed by posterior colpotomy.

Dr. F. A. PURCELL: Uterine Carcinoma removed by Vaginal Hysterectomy.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Treatment of Shock.—Paralysis of Laryngeal Abductors.—Abdominal Section.—Exhibition of Cases and Specimens.

A MEETING of this society was held on Dec. 2nd, the President, Mr. EDWIN LEE, being in the chair.

Mr. BASIL HALL (Bradford) read a paper on the Treatment of Shock by large Doses of Strychnine. He related briefly a case of air embolism occurring during operation and also a case of apparently hopeless shock after the removal of an abdominal tumour. In both these cases when death on the table seemed certain, recovery took place after the hypodermic injection of one-third of a grain of strychnine. He also referred to eleven other instances of severe surgical shock where doses varying from one-fifth to one-third of a grain had been injected with satisfactory results and drew attention to the report of a case of snake-poisoning where recovery followed the administration of large doses. In discussing the remarkable tolerance of the drug in conditions of profound shock he compared with it a similar action in the case of alcohol. He urged that strychnine given boldly in such doses as he had indicated was a valuable remedy in surgical shock in its severer forms.

Dr. S. LODGE (Bradford) read notes of a case of Bilateral Paralysis of the Laryngeal Abductors successfully Treated by Removal of the Isthmus of a Bronchocele.

Mr. LITTLEWOOD brought before the society a series of 7 cases of Volvulus treated by Abdominal Section (3 recoveries) on which he had operated during the past three years. Case 1.—The patient, a man, aged sixty-two years, had volvulus of the large intestine involving part of the transverse colon and descending colon and part of the sigmoid flexure. The volvulus was 10 in. in diameter and displaced the heart upwards into the third intercostal space. Operation was performed 5 days after the onset of acute symptoms. Death occurred 30 hours later. Case 2.—A man, aged sixty one years, with volvulus of the cæcum, part of the ascending colon, and part of the ileum. The volvulus was about 5 in. in diameter. Operation was performed 5 days after the acute onset and recovery ensued. Case 3.—A woman, aged fifty-seven years, with volvulus of the sigmoid flexure. Operation was performed 6 days after the acute onset and death took place 40 hours later. Case 4.—A girl, aged eleven years, with volvulus of the sigmoid. Operation was performed about 36 hours after the acute onset. She had general distension with peritonitis and ultimately recovered. Case 5.—A woman, aged thirty-two years, with volvulus of the small intestine about 10 in. in length. Acute symptoms started about 3 weeks after confinement and the operation was performed six days after their onset. There was general peritonitis with stinking blood-stained fluid in the peritoneal cavity. The volvulous portion of the bowel was deeply congested and adherent by soft adhesions to the surrounding intestines. The pelvis was drained, the lower part of the wound was not closed, and the twisted portion of the bowel was brought near the opening. Thirteen days later the volvulus, which had become gangrenous, separated and was removed. Two months later the intestinal fistulæ were closed by separating the parts from the adhesions and suturing the upper and lower portions of the bowel together. The patient made a good recovery and is now quite well, having since the operation been delivered of

twins. Case 6.—A man, aged fifty-three years, with volvulus of the small intestine involving several feet. Operation was performed five days after the onset of the disease. Death occurred six days later. Case 7.—A man, aged twenty years, with volvulus of the small intestine about 2 ft. in length. There were tuberculous mesenteric glands and adhesion. Three days after onset operation was performed. Death occurred four days later.

Dr. WARDROP GRIFFITH showed a case of Painless Enlargement of the Liver occurring in a man, aged twenty-one years. The enlargement, which was very marked, came on after an attack of acute pneumonia and was unaccompanied by jaundice or loss of flesh. There was very slight ascites, but no other sign of portal obstruction, and there was no alcoholic history. He was improving under iodide of potassium. There was no syphilis.

Mr. LITTLEWOOD showed the following:—1. A man, aged forty-six years, whose Rectum he had removed eight weeks previously and had succeeded in getting primary union between the divided ends of the gut. 2. A man, aged forty-five years, with Carcinoma of the Breast. 3. Abdominal Gestation (fourth year). The thorax of the fœtus was opened immediately after its removal from the body. The fœtal heart continued beating one and a half hours.

The following card specimens were exhibited:—

Dr. WARDROP GRIFFITH: (*a*) A case of Primary Muscular Dystrophy; and (*b*) Specimens from the Post-mortem Room.

Dr. BRONNER (Bradford): (*a*) Microscopic specimen of Carcinoma of the Vocal Cords in a man, aged twenty-eight years, simulating papilloma; and (*b*) Angio-fibroma of the Vocal Cord in a man, aged seventy years, simulating carcinoma.

Dr. CHURTON: (*a*) Syphilitic Pachymeningitis, &c., causing complete aphasia and partial right hemiplegia; (*b*) Post-Influenzal Paraplegia; (*c*) Tuberculous Cerebral Tumour with left Hemiplegia and Complete Blindness; (*d*) Chorea of Two Years' Duration in a man aged sixty years; (*e*) Crossed Paralysis; and (*f*) Displaced (congenital) and Fixed Right Kidney with Pyonephrosis.

Mr. MOYNIHAN: Tuberculosis of the Tunica Vaginalis.

Dr. TREVELYAN: (*a*) A specimen of Polypus removed from the Larynx; and (*b*) a specimen of Rupture of the Lung.

Dr. HELLIER: Scoop for Puerperal Uterus.

Mr. SECKER WALKER: Skiagram showing a piece of Brass in an Eye. Attempts were made to remove the metal but as these failed Mules's operation was performed.

LIVERPOOL MEDICAL INSTITUTION.

The Pathology of Ovarian Tumours.—Exhibition of Specimens.

A MEETING of the pathological and microscopical section of this society was held on Dec. 8th, Mr. F. T. PAUL being in the chair.

Dr. ALEXANDER read a paper on the Pathology of Ovarian Tumours. It was chiefly based upon an accurate examination of all the cases he had operated on during the last two years. He gave a careful description of the naked-eye and microscopical anatomy of all his specimens and illustrated his paper by numerous lantern photographs and microscopic specimens. He had had several cases of ruptured cysts and discussed the causes of rupture. He also showed an excellent specimen of confluent ovarian cyst, one large cyst with two pedicles, one going to each side. He gave a good deal of attention to dermoid cysts and described a unique case in which the fatty and hairy contents of the cyst had become agglutinated and rolled into little pellets, so that when the cyst was opened its cavity was filled with little masses having a striking resemblance to green peas.—Dr. E. T. DAVIES discussed the question of the malignancy of ovarian papillomata.—Mr. PAUL and Dr. GRIMSDALE also discussed the paper and Dr. ALEXANDER replied.

Mr. LARKIN showed, for Dr. NATHAN RAW, a specimen of Double Vagina and Septate Uterus obtained from a woman, aged forty-five years, who died from sarcoma of the lumbar spine. She had had three natural labours, but in none of them did the abnormality seem to have been detected. Nor did it cause her inconvenience in any way. The vaginal septum was thick and fleshy and the two vaginas were of about equal size. There was an os uteri on each side. The uterus was not bicornate but was divided by a thick septum.

Mr. HAWKINS-AMBLER showed a Uterus removed by Vaginal Hysterectomy for Cancer confined to the cervix. The patient was fifty-two years of age and was the subject of diabetes, passing 5 per cent. of sugar. Two days after the operation she had symptoms of diabetic coma which passed off on treatment by alkalies. The sugar disappeared from the urine after the operation and had not since returned. Otherwise recovery was uneventful.

Dr. GRIMSDALE showed a well-marked specimen of Tubercle of the Fallopian Tubes. The microscope showed well-marked tubercles with large giant cells in the mucosa. The patient was a single woman, aged twenty-six years, who attributed her symptoms to taking cold. She had a large swelling in the left lower abdomen which disappeared after seven weeks' treatment in hospital. Three months later a similar swelling appeared on the right side. Abdominal section was performed, the fluid escaped, and the tuberculous tubes were removed. She recovered and reported herself well two years later.

Mr. R. A. BICKERSTETH showed a Squamous-celled Epithelioma of the Upper Jaw which undoubtedly commenced in the antrum.

Mr. THELWALL THOMAS showed an Adenoma of the Testis from a man, aged twenty-seven years. It was really extra-testicular and probably arose in the paradidymis.

Dr. LESLIE ROBERTS showed specimens of Giant Bacilli (horn-cell organisms). They were flask-shaped and of no pathogenic significance, growing saprophytically in the horny epidermis.

Mr. R. W. MURRAY showed an exceedingly interesting and rare specimen of Solitary Sacral Kidney. It was obtained from a boy, aged eight years. There was no trace of kidney in the normal position on either side. The single kidney was large and situated below the bifurcation of the aorta on the promontory and in the hollow of the sacrum and more to the left than to the right of the median line. There was a single—left—ureter which was only 2 in. long. The vascular supply was derived from the aorta by two vessels given off at the point of bifurcation and after a short course entering the top of the kidney. Clinically the case was also of great interest. The boy had been passing calculi for three years. On two occasions impacted calculi had been removed from the urethra. Twelve months before death a calculus became impacted in what was thought to be the left ureter, close to the bladder. This Mr. Murray with his finger in the rectum succeeded in forcing into the bladder. A similar impaction occurred some months later which could not be relieved and the region of the left kidney was explored but no kidney could be found. The abdomen was opened and no kidney could be found on either side, but a mass was felt in the pelvis behind the bladder. There was never complete suppression of urine, but the boy died some time later and at the necropsy the true state of the parts was made out. The pelvis of the single kidney was much dilated and the ureter contained numerous calculi.

Mr. DOUGLAS CRAWFORD showed a case of Encysted Hydrocele of the Epididymis. It had formed acutely. The globus major was converted into a large thick-walled cyst containing straw-coloured fluid and having lymph on the walls.

Mr. ROBERT J. HAMILTON showed: 1. A Metastatic Carcinoma of the Eyeball from a woman, aged thirty-five years, who had been operated on six years ago for mammary cancer and again six months ago for recurrence in the axilla. She had had great pain in the eye and gradual loss of vision. The ophthalmoscope showed what appeared to be complete detachment of the retina. 2. A Melanotic Sarcoma of the Choroid from a woman, aged twenty-five years.—A discussion followed in which Mr. PAUL, Dr. ALEXANDER, Mr. RUSHTON PARKER, Mr. HAWKINS-AMBLER, Dr. GRIMSDALE, and Mr. R. A. BICKERSTETH took part.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.—Pulmonary Regurgitation.—Sulphonal Poisoning.

THE second ordinary meeting of this society was held on Dec. 7th, Sir JOHN BATTY TUKE being in the chair.

Dr. RAINY showed a patient who suffered from Probable Muscular Dystrophy. The affection first showed itself nine months previously, beginning with stiffness and pain in the muscles and joints of the right arm. The arm became thinner and now he was unable to straighten it at the elbow. Certain of the muscles of the upper arm were markedly atrophied. This atrophy showed itself to a much less degree in the forearm. The triceps, deltoid, and spinatus muscles were greatly wasted. There was, however, no increase in the muscular irritability and electrical reaction was normal; there was no trace of degenerative reaction. The case was one of either primary myopathy or a degeneration in the muscles secondary to joint affection.

Mr. STILES exhibited a Child six months after Reduction of a Congenital Dislocation of the Hip by the method of Lorenz. The patient, aged four years, was shown to the society six months previously and Mr. Stiles thought it would be a suitable case for trying this method of reduction which was largely practised on the continent. Lorenz had performed reduction in upwards of 100 cases successfully and another observer had done the same operation 104 times with 97 successes. Mr. Stiles failed in his first attempt to reduce the dislocation in this patient as he did not employ sufficient force. It was essential to pull down the trochanter until it assumed its normal level. After this attempt the child was kept in bed for six weeks with a 12 lb. extension weight applied to the limb. Under chloroform the second manipulation was successful. The child was placed on a mattress on the floor and chloroform narcosis produced. Extension was made by pulling on the limb above the knee-joint and counter extension by means of a perineal band. The force required was considerable and it must be exercised slowly and gradually increased. When the trochanter regained its normal level the thigh was flexed at right angles to the trunk still keeping the limb extended. It was then rotated slightly inwards; when the limb was in this position it was slowly abducted until the limb was at right angles to the trunk, when a sudden sound of reduction was audible and the limb now retained that peculiar abducted position. The limb was now put up in plaster extending above the pelvis and as low as the knee and kept so for six weeks or two months. The bandages were then removed and the amount of abduction having been slightly reduced they were re-applied. The child was now encouraged to walk and so pressure was applied to the rudimentary acetabulum by putting in a high heel on the sound limb. Six weeks later the bandages were removed and the abduction was still further reduced, and again the plaster was renewed. After the third change the child was sent home. Now six months after the reduction there is no deformity, the gluteal folds are symmetrical, there is no shortening of the limb, and the trochanter occupies its normal level. Reduction should be practised early in life—probably about the third year was the best period. It was seldom that the deformity could be removed if the child was above five years of age.

Mr. CATHCART showed a patient in whom symptoms of Myxœdema were subsiding after the left half of an enlarged thyroid had been removed. The patient was a woman who twenty years previously had suffered from somewhat similar symptoms. These disappeared, however, to return eight years ago. There was great alteration in her features; she became heavy and dull; there was swelling of the face, the skin was dry, the tongue was large, the nails were brittle, the hands broadened, and hair fell out. Altogether the symptoms and signs resembled those of myxœdema. The left half of the thyroid was removed three weeks ago by Kocher's method on account of dyspnœa and dysphagia. Since then she had made a remarkable improvement; within a week of the operation she could speak distinctly. Evidently the removal of the left lobe had stimulated the right lobe to a better action. The microscopical sections of the thyroid showed simply a colloid degeneration.

Dr. WILLIAM RUSSELL described the Clinical Symptoms of a case and showed the Brain from which a tumour which caused a breach between the visual word centre and the motor speech centres was removed three times in succession. He indicated the steps by which he had determined that the tumour came to or near the surface in the lower part of the ascending parietal convolution. The tumour was a glioma.—Mr. COTTERILL described the operation as he performed it in this case. The trephine opening exactly localised the tumour which was at first of the size of a walnut. It was removed and the relief to pain was very great. Thirteen weeks later the tumour which had regrown was again removed by means of a periosteal scraper. At this second operation the tumour was of the size of a small Tangerine orange. Again the pain was greatly improved. The third operation was performed when the patient's case was hopeless and was done only to ameliorate her condition.

Mr. STILES exhibited several bones from the body of a rickety child showing Multiple Fractures and skiagraphic representations of the body. The child when admitted to the hospital was in a neglected and emaciated condition with several bed-sores and deformities in the extremities.

Dr. SCOT SKIRVING showed: 1. Extreme Enlargement of the Ischial bursa which occurred in a middle-aged man. 2. The Peculiar Contents of the same—large, rounded, melon-seed-like bodies. The sac contained about 4 oz. of fluid and the cavity was so large that the fist could easily be introduced. Six years previously the patient had suffered from a similar swelling on the opposite side. 3. Ruptured Kidney. The peculiarity in the case was the enormous amount of blood extravasated and the length of time which the man survived—about 12 hours—after receipt of the injury. The patient, a carter, was attempting to climb on to his cart when he fell and was pushed along by the wheel which did not pass over him. He was greatly collapsed but never lost consciousness. The eighth to the eleventh ribs were fractured on the right side and the kidney was entirely broken across on that side, the lower fragment being entirely separated by blood-clot from the upper. Several pints of blood were effused behind the peritoneum. There was also a rupture of the liver, a piece 4 in. long and 1 in. deep being entirely detached.

Mr. CATHCART showed: 1. Microscopic specimens from the Enlarged Left Lobe of the Thyroid removed from the patient whom he exhibited. 2. A piece of Intestine Six Months after Excision and Suture for Gangrene from Strangulated Hernia.

Dr. F. D. BOYD read a paper on Pulmonary Regurgitation. He remarked on the rarity of the affection and described two cases which had come under his observation. One of the cases was evidently due to subacute endocarditis and was treated with benefit by injections of anti-streptococcic serum. Six months later, however, the heart was found to have undergone greater dilatation, the diastolic murmur in the pulmonary area was louder, and the patient gradually sank. The bacteriological examination of the blood proved negative but the injections certainly did good. As regards the causes of this affection it might arise, when not congenital, from secondary dilatation due to increased pressure or from inflammation of the valves. As a rule the mitral valve was the one first affected. Age seemed to be of little importance, and though it was usual in the young one case was described as occurring in a patient aged forty-eight years. The prognosis was grave when once the disease was established, there being a rapid loss of compensation, the right ventricle and the tricuspid valve being both feeble. The diagnosis was not easy. In the two cases described there was no increased loudness in the murmur during expiration as had been said to occur. The murmur might be heard at the back at the angle of the left scapula, but no great importance could be placed in this sign. There was nothing characteristic in the pulse, which was generally rapid, weak, and probably irregular. It was of importance to locate its maximum intensity area and to note its conduction down the left side of the sternum and towards the left.—Dr. GIBSON, Dr. RUSSELL, Dr. RITCHIE, Dr. RONALDSON and Dr. WATSON took part in the discussion and Dr. BOYD replied.

Dr. LOVELL GULLAND contributed a paper on Sulphonal Poisoning. He related the case of a man, aged thirty-nine years, of alcoholic temperament, whose case had come under his personal observation. Owing to insomnia this patient had been in the habit of taking 30 gr. of sulphonal nightly. In all he had taken above 1200 gr. A week before his death his gait was observed to be staggering and his speech was thick, but this was put down to alcoholism. When seen by Dr. Gulland for the first time he was stupid and sleepy though easy to rouse and intelligent when spoken to. His motor power was greatly enfeebled and he could not articulate properly. The urine was deep claret coloured. He died suddenly and the post-mortem examination showed that the liver was chocolate coloured, the kidneys were not cirrhotic but congested, the spleen was diffluent, the walls of the heart were very fatty, the blood was chocolate-coloured, and the brain was congested. Microscopically the liver showed no great change but fatty infiltration at the periphery of the lobules and hyaline degeneration of the

walls of the portal vein. In the kidneys the secreting epithelium was only affected, the cells being shrunken into masses of granular protoplasm; the spleen was full of "shadow corpuscles" and the suprarenal capsules showed some columns in which the cells were small and shrivelled. The blood showed poikilocytosis. As regards the clinical symptoms coördination might be affected for weeks by the administration of a single dose. In chronic poisoning gastro-intestinal symptoms generally first appeared, nervous symptoms then appeared, ataxia, paralysis of the facial muscles, general convulsions, coma, &c. The urine contained hæmato-porphyrin as well as unchanged sulphonal. The case usually ended by heart failure. In acute cases the symptoms might come on suddenly; the sleep might be for days; hæmato-porphyrinuria seldom occured in such cases. The prognosis was, as a rule, good in acute but not so in chronic cases. Sulphonal was not readily soluble and so might remain in the intestinal canal or in the blood for long, as it was not easily excreted by the kidneys. The constipation which was usually present would assist in this accumulation. Sulphonal might cause death without producing hæmato-porphyrinuria. This pigment might be present in the urine in cases of lead poisoning or in hæmorrhage from the intestine. The cause of death was probably due to uræmia (using the term in its widest sense). In acute cases as the poison was slowly absorbed the stomach should be emptied at once and a purgative given. The kidneys should be encouraged to act freely. Large enemata of warm water had been found useful. In chronic cases the same remedies might be employed as well as large doses of alkalies to render the urine alkaline and so stop the formation of hæmato-porphyrin. Dr. Gulland has found that more sulphonal was used than any other drug. He pointed out the cases suitable and unsuitable for its administration. The maximum daily dose for a man should be from 15 to 30 grains. It ought never to be given in tabloid form. Hot alcohol (as whisky toddy) was the best vehicle for it. Patients ought to be kept under observation during the whole time the drug was being taken. Sulphonal should be used with much greater caution than was usual at present.—Sir JOHN BATTY TUKE, Dr. CRAIG, and Dr. RUSSELL made remarks on the use of the drug.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN.—The usual monthly meeting of this society was held at 40, Leicester-square, W.C., on Dec. 5th, the President, Mr. J. Fairbank, being in the chair.—Mr. Storer Bennett, the curator, showed a Denture of a somewhat primitive character which had been made in Naples in 1850. The plate was lined with wash-leather and was tolerated by the patient for nearly twenty years.—Mr. J. F. Colyer showed for Mr. Carter of Leeds a Suture Case for use in the treatment of fractured mandibles.—Mr. R. H. Woodhouse and Mr. Clayton Woodhouse exhibited Models of Cases in which Irregularities in the Position of the Teeth had been corrected by extraction.—Mr. W. A. Hunt brought under the notice of the members a patient in whom the mandibular teeth had been removed and the alveolar ridge had almost disappeared so as to have practically a flat surface. He asked for suggestions as to the mode by which a satisfactory denture could be made.—Mr. F. J. Bennett read an interesting paper on "Some Old and New Views of Calcification of the Teeth. The researches of Rainey and Harting which have so largely influenced ideas on the calcification of teeth and bone were referred to. Their experiments, it will be remembered, consisted in causing salts of lime to be formed in the presence of a viscid medium. The substances employed by Harting were either calcium chloride, calcium nitrate, or calcium acetate, uniting in the solution with either sodium carbonate, sodium phosphate, or ammonium phosphate. The colloid fluid employed was albumin or gelatin. The experiments of Rainey were made with gum arabic in solution which was allowed to mix slowly with another solution of gum containing potassium carbonate, the calcium in the gum arabic combining with the carbonate from the potash to form calcium carbonate which after a lapse of some weeks was found not to exist in crystal form but in the shape of globules. The union of these globules exactly resembled the youngest layers of the shell of crustaceans and he assumed that these globules also explained the nature of interglobular dentine. Mr. Bennett considered that a theory of calcification of bone and dentine based on these experiments was open to grave objections. Calcium phosphate formed from calcium chloride and sodium or ammonium phosphate in the presence of albumin or gelatin appears in the form of crystals. If calcium carbonate is produced at the same time the precipitate consists of the organic matter plus two calcareous salts. If calcium phosphate exists in large quantity the precipitate remains, even after several weeks, in the amorphous or colloid state, but if the calcium phosphate is present in small quantity then the precipitate is in the form of calcospherites. In 100 parts of enamel there are 89·82 per cent. of calcium phosphate and 4·38 per cent. of calcium carbonate, while in dentine the calcium phosphate amounts to 56·7 per cent. and the carbonate to 3·36 per cent.; it is therefore difficult with this overwhelming proportion of calcium phosphate to assume that calcospherites occur in connexion with tooth calcification. Experiments of Dr. Ord confirm this view and it is therefore evident, if the idea be entertained that interglobular dentine is allied to Rainey's calcospherites, it can only be so on the assumption that the defective area consists principally of carbonate and not phosphate of lime and on this point there is no evidence. The spherical forms met with in the various stages of tooth formation are not easy to account for and it is by inference only that they are connected with the globules or calcospherites of Rainey and Harting. A reference was made to Dr. Sims Woodhead's views on bone formation which tend rather to the idea that the salts are deposited in the fibrous matrix simply as granular particles in no chemical relation with the bases whatever and Mr. Bennett considered that in the theory of Dr. Woodhead there may be found a clearer understanding of tooth formation.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.—A meeting of this society was held on Dec. 1st at 20, Hanover-square. The President, Dr. R. Fortescue Fox was in the chair.—Dr. William Bruce read a paper on Separate Rôles played in Rheumatic Affections by (1) the Joints; (2) the Muscles; and (3) the Nerves; and the Consequent Indications for Treatment by (1) Rest; (2) Baths and Massage; and (3) by Electricity. With regard to the nerves he stated that particular regions are chosen, as it were, for the expression of pain and those regions in a general way correspond with reflections in particular sensory tracts of the brain and spinal cord. He regarded acute rheumatism as a distinct "zymotic" disease. After an experience of nearly thirty years in the treatment of rheumatic affections of hip, ankle, and thumb, and the corresponding joints of the lower limb, he held that the diseases are really articular and that neuritis is the result and not the cause of the mischief.—The President pointed out the present disadvantage in discussing rheumatism inseparable from the want of clear definition in the terms used. It was difficult to believe that all rheumatic pains in the muscles and nerves were due to primary affections of the joints.—Dr. Geo. Oliver said he had long entertained the view that in chronic rheumatism and chronic goutiness the state of the nerve centres played an important rôle in causation. But there were difficulties in accepting the nerve origin as the sole one. For some years he had been studying the blood-pressure and the blood in these cases and he had come to the conclusion that viewed from these standpoints there was no line of demarcation between chronic rheumatism and goutiness. He therefore regarded these conditions as clinically indistinguishable.—Dr. Bruce replied.—Dr. R. W. Felkin read a paper on the Climate of the Egyptian Soudan. He began by mentioning the size of the country and explained that in such a vast area various climates must be obtained. Roughly speaking, the ninth degree of N. latitude divided the country into two parts. To the north of it are deserts, rocks, an Arab population, a high mean annual temperature (over 85° F.), a dry atmosphere, and slight rainfall (under 5 in. north of Dongola, under 10 in. north of the Sobat). South of 9° N. the country was very fertile, it had a high mean temperature of about 75° F., the range of temperature was slight (about 10° F.) and the humidity was over 70 per cent. This area is inhabited by negroes. He concluded by referring to the prevalent diseases—malaria, dysentery, diarrhœa, Guinea-worm, &c. He said that it was noteworthy that malaria and phthisis did not occur together in Central Africa and he mentioned some interesting results which he had obtained with tuberculin in malaria. Dr. Felkin urged the importance of the right men being sent to open up the country and gave his opinion as to the kind of men best fitted for life in tropical Africa.—The President said

that it behoved the British Balneological and Climatological Society to consider not only the curative or medical value attaching to particular climates but also in what manner different climates affected healthy populations. This latter view applied especially to our colonies and dependencies and became of great importance in times of national expansion like the present.—After various remarks and questions from members present Dr. Felkin replied.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—At a meeting of this society on Dec. 7th, Mr. T. D. Pryce, President, being in the chair, Mr. Laws read a paper on Pseudo-renal Retinitis, giving notes of cases illustrated by drawings showing that all the appearances of renal retinitis might be present where there was no evidence of renal disease. In all these cases the retinal arteries were of the "silver wire" type of Mr. Gunn, and it was suggested that there was in these patients a similar condition of the renal arterioles causing interference with excretion and an augmented proportion of waste products in the blood. This increase was not more than might be tolerated, for many of these patients lived in good health for years. But when there was added to it a circulatory difficulty such as that due to the pressure of the thickened retinal arteries on the veins the tissues succumbed to the poison and a renal retinitis was produced.—Mr. Anderson showed a woman after Choledolithotrity performed on Oct. 17th. The patient had suffered for a lengthened period from frequent attacks of slight jaundice, with severe pain radiating over a wide area in the thorax and abdomen and terminating in vomiting which at once relieved the pain. There was marked cachexia and emaciation. The single soft stone, ½ in. in diameter, lay in the diverticulum of Vater and when discovered was easily crushed between the fingers. The patient has since been quite well and has gained 16 lb. in weight.—Mr. Willis referred to a precisely similar case under his own observation, which was operated upon in the same manner thirteen months previously with complete relief up to the present time.—Mr. Mackay showed a Dermoid Cyst removed from the broad ligament of a girl aged eleven years.

ERRATUM.—Pathological Society.—In the report of the meeting of this society published in our issue of Dec. 10th the name of Mr. J. R. Lord was by an error printed as Mr. J. R. Lunn.

Reviews and Notices of Books.

Atlas der Syphilis und Syphilisähnlichen Hautkrankheiten. Für Studirende und Aerzte. Von Dr. MARTIN CHOTZEN. (*Atlas of Syphilis and Diseases of the Skin resembling Syphilis.* For Students and Practitioners. By Dr. MARTIN CHOTZEN.) Hamburg and Leipzig: Leopold Voss. 1898. Price, bound in morocco, 40 marks.

WE have received the seventh and eighth and the eleventh and twelfth parts of this atlas. The other numbers are not to hand. There are in all seventy-three plates, coloured and uncoloured, representing not only syphilitic lesions but skin diseases supposed to resemble them. Of these latter, counting from the index, there appear to be fully one-half. These, while perhaps adding to the value of the atlas to the general practitioner, detract from it as a work of reference for syphilitic affections, with which we should have thought there would be no difficulty in filling the entire book, the more so as they are not confined to surface lesions. Moreover, we do not think that the author has been always wise in the selection of the non-syphilitic affections, as in many instances they are not those most likely to be confused with syphilis. Confining our attention to the parts before us we find in Part VII. a papulo-squamous syphilide, two of leucoderma colli, a papulo-circinate eruption of the neck not very well drawn, a papulo-pustular eruption of the forehead, and two small figures, a framboesiform syphilide of the cheek, nose, and penis, and a bromide acne of the thorax which is not a characteristic eruption. The syphilides, except the one mentioned, are good representations. In Part VIII. there is a poor plate of acne vulgaris of the back, a worse one of extensive impetigo contagiosa of the face, a well-drawn tubero-serpiginous syphilide of the back, a very peculiar-looking serpiginous tubero-ulcerous syphilide, a good tuberculo-serpiginous lupus vulgaris of the buttock, and an unrecognisable psoriasis vulgaris of the scalp.

The plates in Part XI. give in colour good representations of stomatitis mercurialis and paronychia and onychia exulcerans, defluvium capillitii from a papulo-squamous syphilide, alopecia areata—not the most typical form—and periostitis of the leg bones. The uncoloured are five figures representing perforation of the hard and soft palate, suppurative periostitis of the bones of the nose, and two figures of defective septum. Part XII. represents in colour serpiginous ulceration of the head and forehead with a node—not a very good example. A plate with six figures of lesions of the larynx and eye is well executed; a hand labelled "lues hereditaria, pemphigus syphiliticus" is, although a well represented, not a well-selected, example of the affection. Among the uncoloured there are again two examples of the "lost chord" in the bridge of the nose, a very good reproduction of cicatrices periorales in hereditary syphilis, another of the Hutchinsonian teeth, and a skiagraph of nodes in the leg bones.

Although the size of the atlas is quarto the plates themselves are about 7 in. × 5 in. and the lesions therefore are only life size when a small portion is represented. The reproduction is apparently by a photo-lithographic process, and though not of the highest class of coloured plates is sufficiently effective. The defects appear to be due rather to the artist and the author's selection of cases than to the publisher's portion of the task. As a whole, the ordinary skin lesions are not very successful and some of the syphilitic lesions might have been taken from better selected cases. Still, considering the moderate price of the work and the large number of plates, the practitioner will receive an adequate return for his outlay.

Doctor Therne. By H. RIDER HAGGARD. London: Longmans, Green, and Co. 1898. Price 3*s.* 6*d.*

THE youngsters who are popularly supposed to devour each new novel by Mr. Rider Haggard will hardly accept "Doctor Therne" as a welcome addition to the school library. This grim story is intended to stimulate the unintelligent and to enlighten the uneducated parents who are ready to gamble with the lives of their children and neighbours by taking advantage of the "conscientious objection" clause of the new Vaccination Act. Since a Norwegian dramatist converted his critics by proving that a stirring and romantic play can be woven round the defective drainage of a provincial town we have come to realise that no subject is common or unclean to the artist any more than to the man of science. Still it must be admitted that vaccination does not sound a tempting theme for those who seek oblivion in the perusal of stories. But here is where Mr. Haggard's skill is most markedly shown. His didactic treatise is also an excellent novel.

There are many who think Mr. Haggard's transpontine taste for bloodshed does more credit to the heart of an Imperial Federationist than to the head of a talented novelist, and with these it has been a subject of lament that the author of "Jess"—a keen observer and a penetrating critic of modern life—should have directed his skill towards the delineation of the operatic parts and unconvincing thaumaturgy so dear to his younger admirers. But if in the earlier pages of "Doctor Therne" there is some of the old leaven—a needless adventure with Mexican brigands, a precipice, and those scenic properties which suggest an

Alhambra ballet—we are soon carried into a more realistic atmosphere. A certain Dr. Therne sets up a practice in the city of Durnchester, and by his skilful treatment of both surgical and medical cases has the misfortune to collide with the long-vested interests of the distinguished local physician, Sir John Bell. Honourable rivalry soon degenerates into open enmity when Dr. Therne has the misfortune to correct the wrong diagnosis of the older and more experienced man. When Dr. Therne's wife falls ill, in order to smooth matters over he calls in his enemy for the accouchment. The wife, partly owing to Bell's clumsiness, develops puerperal fever—a fact concealed from Dr. Therne, who is permitted to carry to his own patients the infection from his wife's sick-room. Both the wife and a distinguished patient of the unfortunate Dr. Therne succumb to the malady thus unhappily disseminated. A verdict of "manslaughter" at a coroner's inquest, though followed by subsequent acquittal at the assizes, entirely ruins Dr. Therne, and Sir John Bell's practice is triumphantly re-established—a sufficiently revolting (and we hasten to add highly improbable) picture of the amenities of medical men towards each other. A new character a real creation or, let us say, a real portrait of which Mr. Haggard may be proud now appears—one Stephen Strong, an honest, stupid, rich, wrong-headed tradesman, faddist and anti-vaccinationist. The sketch of this man's home; of the wife suffering from lupus attributed to infected vaccine lymph; of the idiotic conversation of the couple who, by a peculiarly happy touch to our thinking, are shown as firm believers in Anglo-Israelism—all this is done in a slight but masterly fashion. Strong espouses the cause of Dr. Therne as a persecuted man.

By a cleverly imagined series of fortuitous circumstances, by offers of money and by the prospect of regaining a practice Dr. Therne is now tempted to lend his name and the weight of his experience to the cause of anti-vaccination in the face of his knowledge and deep-rooted convictions as to the efficacy of vaccine lymph as a prophylactic against small-pox. In rapid narrative an election to Parliament, the ravages of a small-pox epidemic at Durnchester and the moral and psychological decadence of Dr. Therne are crowded into what might have been a much larger book. Few sensational scenes in all fiction—we say this quite deliberately—have been better told than where the daughter of the miserable hero discovers her father vaccinating himself at midnight after a long meeting in favour of the "conscientious objector" clause. The final exposure of Dr. Therne on a public platform by a young medical man who makes him show his arm to a crowded meeting is also a thoroughly well-described episode, and was probably prompted by an occurrence which recently took place in London in connexion with the adventures of a gentleman whose career would have had the deepest interest for Mr. Haggard a few years ago.

Mr. Rider Haggard has now entered into an honourable competition with Ibsen and Zola who have not disdained to lend their eloquence to curing the deafness and blindness of the stupid, the ignorant, and the mischievous for whom blue-books and statistics are vain things fondly invented. Dr. Therne will certainly challenge comparison with Dr. Stockmann, in the "Enemy of the People." In the former we find a man sacrificing honour and character and morals, posing as the friend of society for material advantage, a course which is only palliated by the cruel conspiracy and the more cruel temptations which beset him. In Dr. Stockmann we see an attractive and heroic instance of a man sacrificing all worldly wealth, his family, his home, and his reputation in the cause of truth and honesty, and deliberately choosing to be regarded as the enemy of society by his fellow citizens while discharging what he conceives to be his duty. To our mind Mr. Haggard would have shown subtler art had he decided to present not a weak man whose wrongs excuse him so much, but a man who from deliberate fraud at last came to believe in his own perversion, and who would deceive others being himself deceived. Dr. Therne is just a trifle too romantic for his sordid sin. His antithesis, Dr. Stockmann, was none the less sympathetic for being rather ridiculous, rather irritating, and therefore more probable. However, we do not want to wear the appearance of teaching Mr. Haggard to write a story.

In conclusion we must commend Mr. Haggard's courage in thus entering the lists against the anti-vaccination party. As a novelist and a politician alike it is evidently to his advantage to take no step that would be likely to alienate from him any large body of possible supporters. Yet he has risked losing many readers and creating a fanatical opposition to whatever he may do in public or private capacity for the sake of telling the truth.

Jahresbericht über die Fortschritte auf dem Gebiete der Chirurgie. Redigirt und herausgegeben von Professor Dr. HILDEBRAND in Berlin. II. Jahrgang: Bericht über das Jahr 1896. (*Year-book of Surgery.* Edited by Professor HILDEBRAND of Berlin. Second Year: Report of the Year 1896.) Wiesbaden: J. F. Bergmann. 1897. Pp. 1341.

THIS enormous volume represents without doubt an immense amount of work. Professor Hildebrand has been assisted by a large number of surgeons, chiefly in Germany, but also in other countries, and they have collected here references to all books and papers on surgical subjects which appeared during 1896; but there are more than references in many cases: whenever a paper has appeared to be of much importance an abstract of it is given, of a length quite sufficient to enable the reader to appreciate the value of the paper. A very convenient system of classification has been adopted. In the first section is given a list of articles referring to the history of surgery and then are catalogued all the general treatises on surgery which were published during the year. Next comes a list of hospital reports, followed by the papers connected with topographical anatomy. In each case a summary is given of those papers which are considered to deserve it. For instance, a whole page is devoted to a *précis* of an article by Dr. Plummer on the Surgical Anatomy of the Middle Meningeal Artery which appeared in the "Annals of Surgery." General Surgery comes next and then the several parts of the body are dealt with in turn. An Index of Authors is given and it occupies nineteen pages and there is also an Index of Subjects of equal length. We have not been able to detect any omissions, though of course there may be some, and many English names are misspelt; but taking the work all in all it would be unreasonable to expect a more complete or more usefully arranged book. Such works of reference as this are imperatively demanded nowadays by all who have to work in any department of science, for it is not possible for anyone to keep *au courant* with all the numerous papers and articles which pour out from the scientific publishing houses. We can only hope that this "Jahresbericht" will continue to appear regularly.

On Deafness, Giddiness, and Noises in the Head. By EDWARD WOAKES, M.D. Lond., Senior Aural Surgeon, London Hospital, Lecturer on Diseases of the Ear, London Hospital Medical College; assisted by CLAUD WOAKES, M.R.C.S. Eng., L.R.C.P. Lond., Assistant Surgeon to the London Throat Hospital. Fourth edition. London: H. K. Lewis. 1896. Pp. 224, 8vo. Price 10*s.* 6*d.*

TWELVE years have elapsed since the publication of the third edition of this book and it has been found necessary to rewrite the work almost entirely. The main idea is the

ame as that which pervaded the book when it first appeared. It is that in the body there are "correlated tissue areas"; between any two areas thus correlated an intimate relation exists, so that any departure of one of them from its ordinary state is immediately appreciated by a corresponding set of nutritive changes in the other. These regions may be often widely separated, and the explanation of their mutual interdependence is to be found in the association of their afferent and efferent nerves with a sympathetic ganglion. This volume deals, as its title states, with several important aural symptoms, and endeavours to show that in great part they are explicable as reflex phenomena from the irritation of areas which are "correlated" with portions of the auditory apparatus. The treatment to be followed in patients suffering from these symptoms is very fully discussed. Chapters on Foreign Bodies in the Ear, on Ear Affections in Infancy and Childhood, and on Post-nasal Growths are also given. Without assenting to all the propositions advanced by the authors we may say that many parts of the book are very suggestive and well worthy of perusal by those who have to deal with the morbid phenomena associated with the auditory apparatus.

LIBRARY TABLE.

The New Sydenham Society's Lexicon of Medicine and the Allied Sciences. Part XXIV. Scap-Tape. London: H. K. Lewis. 1898.—We have just received Part XXIV. of this valuable lexicon which is now carried as far as "Tape-grass." The society's annual report states that it is confidently hoped that the lexicon may be completed within twelve months and that considerable progress has been made with a Supplement which will follow the completion of the main work. The editors, Mr. Henry Power and Dr. Sedgwick, may be congratulated on this approaching termination of their labours, and many of our readers will no doubt be glad to have in their hands the final number of an excellent work of reference, Part I. of which appeared in 1878

Materia Medica, Pharmacy, Pharmacology, and Therapeutics. By W. HALE WHITE, M.D., F.R.C.P. Lond. Third edition. London: J. & A. Churchill. 1898. Price 7*s.* 6*d.*—The third edition of this well-known text-book scarcely calls for detailed consideration. The chief features of the book are retained while the author has brought the information up to date, more particularly by bringing it into harmony with the new British Pharmacopœia. He includes a list of the additions, together with a list of the omissions. The author has contrived to pack a large amount of information into a very small space and it is presented in a form which can be readily assimilated. He includes in this edition a consideration of diphtheria antitoxin, streptococcus antitoxin, and tetanus antitoxin, the last being dismissed in four lines. These are followed by five lines on anti-venomous serum and by short descriptions of hydrophobia antidote and of piperazin which seem rather misplaced after the description of serums and antitoxins. To the short list of *errata* should be added "aconita" (p. 11) for "aconitina."

Catechism Series. Surgery: Part II., pp. 63; Part III., pp. 64; Part IV., pp. 64; Part V., pp. 64. Anatomy: Part II., Head and Neck. Second edition, with Plates. Pp. 72. Edinburgh: E. and S. Livingstone. Price 1*s.* each net.—There is a natural tendency amongst students as the day of examination draws unpleasantly nigh to seek the aid of "cram" books of one kind or another, and provided that they have done their work well they may derive no little benefit from studying a *résumé* of the subject and from having the facts put before them in a new way, but if a student who has utterly neglected his work expects to gain the required knowledge in a week or two by reading a small volume he will utterly and deservedly fail. These volumes are, as "cram" books go, very fair and if used intelligently may be found of much value. A number of diagrams are given, most of them borrowed from M'Lachlan's "Applied Anatomy," and they are likely to prove helpful.

Nine Medical Songs. Words by J. BLUMFIELD, G. H. RANSOME, and F. H. Music by C. N. CHADBORNE. The Librarian, St. George's Hospital. Price 2*s.* 6*d.*—Most of these songs, though primarily written for St. George's men, would be welcome at any medical smoking concert, for the only two purely local ones are "Back to the Corner Again" and "A Song of St. George's." One of the best, though possibly not the most taking, in the sense that it would not be yelled in full chorus at the end of an evening with so much zest as the "Song of St. George's" is "The Lament of the Large White Kidney." The dignified pathos of this is most touching and Mr. Chadborne's music is in every way worthy of the words. If he were to orchestrate it the piece would produce a most striking effect at a hospital concert. The introduction given out by three trombones, except bars four, five, and eight which should be allotted to that impassive yet sorrowful instrument the bass clarionet, would bring tears to the eyes of even the most hardened pathologist. The first number, "Oh, would I were a surgeon," is an admirable example of F. H.'s skill in writing incisive lyrics, and the music has an unmistakeable and possibly intentional flavour of a passage from "Honour and Arms." Altogether we congratulate St. George's and must in addition praise the designer of the cover.

Health in the Nursery. By HENRY ASHBY, M.D., F.R.C.P. Lond. London: Longmans, Green and Co. 1898. Pp. 227. Price 3*s.* 6*d.*—This is a very well-intentioned little book, written by one fully equipped by his experience to deal satisfactorily with the subject. While dealing chiefly with the prevention of disease the author does not hesitate to indicate the serious results which may follow when Nature's laws are broken. It is essentially a book of health in infancy and early childhood. The author wages warfare against ignorant customs and prejudices which have become sacred through long descent. Nothing connected with the surroundings of infancy appears to escape him. He deals with early training, with the furniture of the nursery, with the hygiene of infancy and childhood, under which term he includes a consideration of the care of infants prematurely born; then he passes on to deal with the clothing appropriate for the various ages, and in subsequent chapters he treats of dentition, of the early signs of disease, of the mental development of the infant, and of backward and exceptional children. As in all other books of this type much space is devoted to a consideration of the dietary of the infant. Concerning the artificial feeding of infants the information given will be most helpful to mothers since it is both simple and practical and it is commendably free from the advertisements of patent foods or of patent forms of milk which are so frequently to be found under such a heading. Greater emphasis might perhaps have been laid on the dangers of a dietary rich in farinaceous food during the early life of the infant. It would also perhaps have been more in accordance with custom to use the term anterior fontanelle in contradistinction to posterior fontanelle instead of employing the term superior fontanelle. The chapter on the early signs of disease is likely to be extremely serviceable and, in fact, the directions throughout the book are calculated to encourage habits of observation and common sense rather than to induce those entrusted with the care of a child to think that they can, unaided by the medical profession, safely tide over all dangers. The book is brightly written and the illustrations, although scarcely artistic, are sufficient to serve their purpose. One of the problems which remains unanswered after the perusal of this book is: Why do

authors of popular works concerning babies so constantly drop into poetry?

JOURNALS AND REVIEWS.

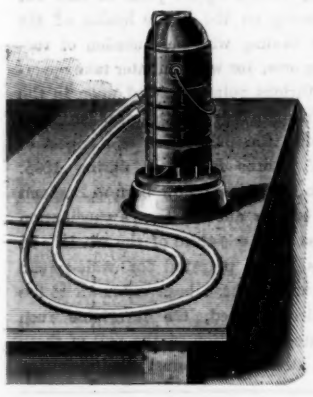
The Practitioner.—The opening editorial paragraphs of the December number announce that in future this periodical will be enlarged and the subscription will be increased to one guinea per annum. The editor refers in feeling terms to the retirement of Dr. J. F. Goodhart and Mr. Treves from hospital work and advocates the inauguration of a state of things in England comparable to that of the German clinics, where the seniors have a staff of well-trained assistants to take routine work off their hands. Mr. Alfred Willett reports a case of Axillary Traumatic Aneurysm which underwent spontaneous cure; among other papers there is one describing that rare condition Primary Sarcoma of the Vagina; the growth was removed and there has been no recurrence for two and a half years. Mr. James Cantlie writes upon Sprue, and Dr. Sydney Short recounts a case of Aneurysm of the Aorta in which pressure symptoms were limited to the trachea. A story by Philip Lafargue, Reviews of Books, the Periscope, Hospital Notes, Notes on Public Health, and the usual pages of Practical Notes make up a good number.

The Phonographic Record. December, 1898. London: Sir I. Pitman and Sons.—This forms the last number of Vol. IV. and is issued with the index to this volume. The opening paper gives an account of an interesting case which came under the observation of Sir William Gowers and which he diagnosed as a case of polyneuritis of obscure toxic origin. The patient did not immediately improve under Sir William Gowers's treatment, but subsequently it was discovered by her medical attendant that she was in the habit of using a hair stimulant containing lead and powdered sulphur. On the lotion being discontinued the patient recovered. Mr. Norman Porritt concludes his Two Instructive Examples of Abdominal Surgery and Dr. Thomas Wilson gives an account of Transient Spasmodic Torticollis in a case of Intraperitoneal hæmorrhage due to tubal abortion.

New Inventions.

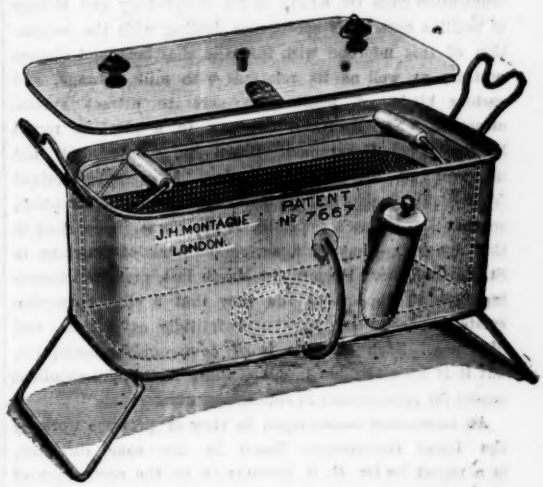
THE "PERFECT" HOT APPLIANCE.

BY means of this apparatus the continuous application of heat, either moist or dry, to various parts of the body, and for numerous purposes, may be conveniently and successfully accomplished. Its essential principle is that water heated in metal cylinders by an automatically regulated alcohol lamp is conveyed by an india-rubber tube to accessory attachments differing in construction according to the purpose for which they are required, and the water after circulating in them returns to the cylinders, where it is heated once more. One of these attachments is a curved metal disc measuring 6 in. by 8 in., to be placed in contact with the abdomen; if wet flannel be interposed between the disc and the skin the effect of a poultice or hot fomentation is obtained without the necessity of disturbing the patient at frequent intervals to renew it, a drawback inseparable from the ordinary poultice. The regulation of the lamp is effected by means of a wire attached to the top of the heating cylinder. We have tested its action and find that it is quite satisfactory. Moreover, it acts perfectly even if the circulation through the tube be stopped. The "Appliance" is 3 in. in diameter by 9 in. high and together with its case it weighs 3 lb. The price is £1 1*s.* and it may be obtained from the "Perfect" Automatic Hot Appliance Co., 303 and 304, Dashwood House, New Broad-street, E.C.



ATMO-THERME STERILISER.

SURGEONS who prefer to use sterile rather than antiseptic dressings will doubtless welcome a steriliser for use in the operating room. The instrument consists of an inner chamber intended for the materials to be sterilised, surrounded by a water jacket heated by a flame placed below. The steam generated in this jacket is conducted through a coil of copper tubing (the super-heater) placed in contact with the flame immediately below the body of the instrument, and is thereby raised to such a temperature as renders it not only quite dry but capable of drying that with which it comes in contact. This dry super-heated steam is then admitted to the inner chamber, where it rapidly penetrates and sterilises any dressings, &c., which may be within. Some preliminary experiments which I made with an instrument placed in my hands by the inventor for the purpose of testing its efficiency, and which was constructed on principles similar to those of the steriliser shown below, were very satisfactory. Non-sporogenous micro-



organisms—viz., bacillus prodigiosus, bacillus typhosus, bacillus diphtheriæ, spirillum choleræ, bacillus coli communis, and staphylococcus pyogenes aureus—were destroyed in ten minutes though they were enclosed within a considerable quantity of rather tightly packed cotton-wool. Dust-covered cotton-wool similarly enclosed was also sterilised in ten minutes. Spores of bacillus subtilis contained on thread, enclosed within a tightly rolled bandage which was itself surrounded by half a pound of cotton-wool, required an exposure of fifteen minutes to effect sterilisation. These results appear at first sight to differ from those of von Esmarch and others as to the disinfecting value of dry super heated steam, but in the apparatus in question it is probable that the material to be sterilised is first exposed to saturated steam and afterwards dried as the temperature rises above 100° C. The instrument used by myself had several minor defects, but I believe these have been remedied in the present instrument. The maker is Mr. J. H. Montague, of 101, New Bond-street, London.

LOUIS COBBETT, M.A., M.B. Cantab., F.R.C.S. Eng.
Cambridge.

THE LANCET.

LONDON: SATURDAY, DECEMBER 17, 1898.

A SUPPLEMENT to the twenty-seventh annual report of the Local Government Board consisting of the report of the medical officer for the year 1897–98 was issued on Wednesday last, and as usual contains information of the first importance to medical men and practical sanitarians. It is on this occasion, as we have found it on previous occasions, useless to attempt to review exhaustively in one or two editorial articles a stout volume packed with information presented in the most concentrated form, so that we must content ourselves with selecting one or two of the topics dealt with for some extended notice, while with regard to the others we must refer our readers to the report[1] itself. In particular these remarks apply to the auxiliary scientific investigations which constitute an interesting group of appendices. Among these a communication from Dr. KLEIN on the morphology and biology of bacillus enteritidis sporogenes dealing with the association of this microbe with infantile diarrhœa and cholera nostras, as well as its relations with milk, sewage, and various kinds of manure, is sure to attract special attention. Sir RICHARD THORNE in a previous report to the Local Government Board has pointed out that microbes of the anaërobic class have not received from bacteriologists and epidemiologists adequate attention, so that Dr. KLEIN'S appendix is opportune. One story in this appendix—that of a severe outbreak of diarrhœa in St. Bartholomew's Hospital in March last, presents interesting facts in support of the view that a close connexion exists between the bacillus enteritidis sporogenes and diarrhœa. Such evidence is of course only presumptive, but it is none the less forcible, while it supplies excellent reason for perseverance in similar research.

An interesting *communiqué*, in view of previous work by the Local Government Board in the same direction, is a report by Dr. G. S. BUCHANAN on the occurrence of certain cases of enteric fever in the following sanitary districts of Suffolk and Essex—Clacton, Walton-on-the-Naze, Haverhill, Braintree, Lexden and Winstree, and Tendring, and the relations of oyster infection to these cases. Dr. BUCHANAN'S summary of facts shows that in a population of some 16,000 persons distributed among places so far apart as Braintree in the centre of Essex, Clacton on the east coast of this county, and Haverhill in Suffolk about eighteen miles from Cambridge, a total of 29 persons only were heard of as having been attacked by enteric fever between the beginning of June and the end of October, 1897, while of these 29 persons no less than 26 had consumed oysters about a fortnight before the date of their attack — "about a fortnight" being regarded as a fair definition of the incubation period of enteric fever. Stating these facts alternatively Dr. BUCHANAN finds that among the inhabitants of, and visitors to, the more limited area comprising the towns of Clacton-on-Sea, Walton-on-the-Naze, and the parish of St. Osyth (this is a small town in the rural sanitary district of Tendring) the total of persons heard of as having been attacked by enteric fever during the month in question was 26, and all these 26 sufferers had consumed oysters about a fortnight before the onset of illness. To quote Dr. BUCHANAN'S own words, "The improbability that a series of coincidences such as this should have happened by mere accident is obviously very great." The next step in the investigation was to trace the suspected oysters, and here Dr. BUCHANAN supplies evidence with full detail and corroboration to show that the particular molluscs by which the 26 persons came by their infection could in each instance but one be affirmed "almost with certainty" to have come from layings at Brightlingsea. Now, in 1895 Dr. H. T. BULSTRODE, medical inspector to the Local Government Board, visited Brightlingsea in the course of an official investigation into the conditions under which oysters are cultivated and stored along the coast of England and Wales, and in his report[2] gave due warning that Brightlingsea was a rapidly growing town and that the danger of contamination to oysters laid down there must tend to materially increase with the addition of new houses unless steps were taken for the proper disposal of sewage. Later Dr. BULSTRODE drew attention to certain layings as being particularly liable to pollution. Dr. BUCHANAN now shows that of the 25 cases where the implicated oysters could be referred "almost with certainty" to layings in Brightlingsea Creek, in 20 cases the oysters had been taken from one or other of two particular layings situated on the foreshore which had been pointed out by Dr. BULSTRODE as conspicuously exposed to sewage pollution. From all these facts it is obvious to our mind that until the sewage of Brightlingsea is dealt with properly a grave risk attends the consumption of oysters obtained from layings there.

Of the most important sections of Sir RICHARD THORNE'S report, important not only from a topical point of view but on account of their bearing on the public health of the future—we refer to those dealing with the question of vaccination—we say nothing now, for we shall later take opportunities to refer to the various points touched upon in the report in some detail. We quote only Sir RICHARD THORNE'S grave words in announcing the publication of a digest of the vaccination officers' returns for births during 1895. "The number of children," he says, "now born in England and Wales who in one way or another escape vaccination is probably not much less than one-third of the whole. In this way the country is being prepared for wide-spread epidemics of small-pox such as have been unknown to the present generation — unless, indeed, the invariable rush and clamour for immediate vaccination on the part of those who have neglected or declaimed against the operation

[1] Twenty-seventh Annual Report of the Local Government Board, 1897-1898. Supplement containing the report of the medical officer. Messrs. Eyre and Spottiswoode, East Harding-street, E.C. 4s. 11½d.

[2] Supplement to the Twenty-fourth Annual Report of the Medical Officer of the Local Government Board, 1894-95, on Oyster Culture in Relation to Disease.

during times of freedom from small-pox should be capable of being so far met in the moment of emergency as largely to mitigate the impending disaster."

AT the annual meeting of the constituents of the Hospital Sunday Fund held at the Mansion House on Dec. 12th and presided over by the Lord Mayor several subjects of considerable interest were discussed in a way which promises well for the success of the Fund in the coming year. It is now somewhat trite to say that this institution is the most effective of all means for uniting religious men of all creeds. But this argument in favour of the Metropolitan Hospital Sunday Fund was never more happily or effectually used than on Monday by the Bishop of STEPNEY, the Rev. W. H. HARWOOD, and other speakers. The slight falling off in the amount of the Fund for the present year has evidently in no serious degree discouraged the members of the Council. It is recognised that the financial disturbance occasioned by the claims of the Jubilee year could scarcely cease all at once and that those claims sufficiently explain the diminished collection. The Bishop of STEPNEY in his excellent speech made a happy suggestion which we trust will be responded to liberally by the public. He pointed out that the collections of the Fund since its commencement in 1873 have amounted to £952,525 and that the sum necessary to make this into a million is £47,475, only a few thousands more than the ordinary collection. Next year would, he hoped, see the total sum made up to the round £1,000,000. There is nothing unreasonable in believing that the ministers of religion will be able to found on this speech an appeal which will raise the sum of the Fund to the amount desired and suggested by the Bishop of STEPNEY. The tone of the meeting and the hearty interest displayed in the Fund by the new Lord Mayor confirm us in this hopeful view.

Another feature of the meeting of Monday was the strong expression of feeling in favour of the voluntary principle as applied to the hospital system. Canon FLEMING gave very effective utterance to this sentiment. He said he hoped the day would never come when voluntary liberality in support of the sick and wounded would be supplanted by State aid. Canon GRAHAM, representing the Roman Catholics, spoke with equal heartiness in the same sense and said that the voluntary maintenance of hospitals in this country was the envy of all foreigners. It is gratifying to find that there is no abatement amongst us of the belief in the superiority of hospitals maintained by the sympathy and humanity of the people as compared with those of foreign countries supported by the State. It may be difficult to say what are all the grounds for so strong a preference. But some of them are clear enough. It is believed that the voluntary principle implies a more personal interest in the institutions and a more humane treatment of the patients. Moreover, it cannot be doubted that on the score of economy the voluntary are to be preferred to the State- or rate-aided institutions. Another and perhaps the most fundamental ground for the preference is to be found in the view that hospitals are essentially charitable institutions for the use of poor persons, in exceptional straits from sickness or accident, needing help and appealing to the good Samaritan of all creeds.

It is not perhaps more than a coincidence that these strong expressions of preference for the voluntary hospitals coincide very much in point of time with a speech by the Duke of DEVONSHIRE on the occasion of the opening of two wards in the new wing of the West London Hospital in which his Grace seemed to associate the subject of the contemplated municipalisation of the vestries of London with that of a better hospital accommodation. We should be much concerned if we thought that the Duke of DEVONSHIRE intended to hint that it is the intention of the Government to include in their impending legislation any scheme for including the care of hospitals as one duty of the projected municipal bodies. Such an important proposal is not likely to reach us in any such casual way. But the friends of the voluntary system of hospital support cannot be too diligent in the use of such means as will increase this support and will deprive the advocates of a different system of any excuse for altering the existing one which is the glory of England and the admiration of foreigners. One means of doing this is in the careful restriction of hospital help to the class for whom it was originally intended and it is gratifying to us to notice that at Monday's meeting Mr. R. B. MARTIN, M.P., made pointed reference to the honest efforts of hospitals to ascertain the fitness of patients to receive attendance in accordance with the recent resolution of the Council making such efforts a merit in hospital administration.

IT would be difficult to imagine worse impeachments, professionally and morally, than those brought against Dr. DAVID WALLACE, a medical man practising at Beckenham, who was indicted at the recent Kent Assizes for having feloniously procured abortion on a young unmarried woman named WARRILOW. A second charge which was not proceeded with but for which Dr. WALLACE was committed by the magistrates was that of having by criminal assault been the author of the prosecutrix's condition, a condition which rendered the first-named crime possible.

The facts were as follows. In 1897 Miss WARRILOW suffered from retroflexion of the uterus. She consulted a medical man at Eastbourne who inserted a pessary. The treatment gave marked relief, but on discontinuing the use of the instrument the misplacement recurred, whereupon Dr. WALLACE, who was called in, re-inserted the support. As alleged by the prosecution Miss WARRILOW on March 11th of this year went unattended to the house of Dr. WALLACE to have the pessary removed. It was upon thi occasion that misconduct was stated to have taken place without the consent and without the knowledge of the patient. It was not suggested that force was used or that the passive agent was hypnotised; the theory put forward was that she fainted from the pain incidental to the removal of the pessary and whilst unconscious was ravished. In the face of Miss WARRILOW'S evidence that she remembered nothing unusual having happened, that she walked home after her visit to Dr. WALLACE, and that there was no circumstantial proof of molestation, we fail to see a *primâ facie* case

against the accused. Moreover, a person does not recover immediately and completely from an attack of syncope and nothing was elicited as to any "coming to"; indeed, it was mere surmise that there was any fainting at all. As the menstrual periods did not occur on three occasions Dr. WALLACE testified that he considered the case one of amenorrhœa consequent on retroflexion and to induce menstruation he introduced a sound into the uterus on May 26th and May 27th. On the second date free hæmorrhage occurred and to check this a mixture containing ergot was prescribed, but this was not taken. Shortly afterwards products of conception were expelled and it was this fact that led to a conversation between Mrs. WARRILOW, the girl's mother, and Dr. WALLACE. The former asserted that Dr. WALLACE, when interrogated as to his knowledge of the patient's recent condition, replied that "he was very sorry; he knew he was the cause of what had happened, and hoped he would be forgiven." This was clearly open to an innocent interpretation, but Mrs. WARRILOW averred that the following significant remark also fell from the accused: "I could not resist the temptation." If the jury could have unconditionally accepted Mrs. WARRILOW'S testimony as to this they would have been logically bound to convict Dr. WALLACE of more than one odious crime. But we quite agree with Mr. Justice HAWKINS who tried the case that counsel for the prosecution went too far when he said that the jury must come to the conclusion that perjury on one or other side had been committed. The late Mr. Justice STEPHEN once said in court that a jury should accept with hesitancy mere hearsay evidence of a conversation as probably no two persons would exactly reproduce from memory what had been said in the hearing of each. When Mrs. WARRILOW became acquainted with the fact that her daughter had been *enceinte* her mental condition must have been considerably perturbed and she may easily have assumed that Dr. WALLACE'S words "I am to blame for this" were a confession of guilt although the conclusion was utterly unwarranted by the premisses. With this belief it was easy to wander from the actual truth and to pick up words suggested by such belief and consistent with it but which may never have been spoken. This in our opinion is the explanation of Mrs. WARRILOW'S most significant piece of evidence which we should hesitate to classify as deliberate perjury.

That cessation of the periods, enlargement of the uterus, and general disturbance of the system might have led Dr. WALLACE to hold his hand was conceded by his counsel who rightly urged that a young practitioner ought not to be judged by the highest standard of attainment such as would be expected of an older physician or of one specially experienced in obstetric medicine. We would go further and say that in a question so argumentative a very considerable margin should be allowed to every medical man for errors of observation and judgment. We remember an instance in which a distinguished gynæcologist diagnosed a condition of pregnancy of three months' duration as a case of anteversion of the womb and unintentionally induced abortion by the very treatment adopted by Dr. WALLACE. From these considerations it was with feelings of relief and satisfaction that we learned the decision of the Maidstone jury to acquit Dr. WALLACE.

Annotations.

"Ne quid nimis."

THE MEDICAL GRADUATES' COLLEGE AND POLYCLINIC.

WE have already written on the scheme for founding a medical graduates' college and we see no great reason to alter the opinions which we guardedly expressed in June.[1] It is impossible to deny that there is much that is interesting in the scheme. It is equally impossible to deny that there are aspects of it as elaborated in the circular before us to excite criticism and even anxiety. The objects of the scheme are shortly, firstly, to assist medical practitioners in their desire to keep themselves up to the best knowledge and practice of the day and, secondly, to make it easier for the sick poor to have their diseases considered in consultation with reference to diagnosis and treatment. The objects are good. The only question is whether they cannot be attained by the use of existing hospitals and societies and whether the new institution, either by its success or its failure, may not prove a source of disappointment and regret to the profession and even to those who promote it. If the objects can be accomplished with existing institutions it is clearly undesirable to create a new one. As we read the laws and constitution of the college it does not appear to us that it will differ very much in its objects from one of our existing medical societies and the proceedings at one of its meetings will very much resemble those of a clinical night at the Clinical Society or the Medical Society where cases are shown and a discussion on the nature and treatment of them takes place. Similarly we see no advantage to the sick poor in the way of consultation that is not either accessible to them now or that might not easily be arranged at any of our hospitals. A central office is proposed to be erected for giving information relating to educational opportunities, operating days at hospitals, and other information which is constantly supplied in the Students' Number of THE LANCET, and in our weekly issue and those of our contemporaries. We are not without fear that the provision for hospital accommodation and for consultations will involve a serious extension of the existing abuses of hospitals by other classes of society than those which now abuse them, to the injury alike of consultants and general practitioners. We recognise the precautions that are to be taken in theory to prevent such abuses, but in practice and in an institution like that which is pictured in the circular such evils will be apt to assert themselves. Finally, the undertaking seems bold in a financial respect. A very considerable income would be necessary to support such an establishment and to pay the officers who are to carry on the work. We should rejoice in any improvement in the methods at present in vogue at hospitals and societies for making them more useful to medical practitioners, but we scarcely see the justification of a brand new college and polyclinic the success of which would imply new risks of hospital abuse and the abstraction of much energy and support from existing institutions.

VOLUNTARY HOSPITALS.

CHRISTMAS is very near us and the usual flood of appeals for money pours in. No form of charity is more worthy of support than that which provides medical aid for the sick poor. There may be differences of operation but the wolf of poverty stands at the door of nearly every metropolitan

[1] THE LANCET, June 4th, 1898, p. 1545.

hospital; they do what they can and yet there is an enormous mass of poverty and sickness still unrelieved. Despite the efforts of the religious bodies and of the thousands of brave men and women who go out to help the poor, despite the millions spent by the Poor-law bodies, the School Board, and the London County Council, ignorance, crime, poverty, and sickness still abound. And though but little impression seems to be made by all these agencies we must think of what the state of matters would be if for one year the fountain of relief, both voluntary and involuntary, were dried up. But as concerning the hospitals it is noteworthy that the London hospitals are badly off mainly because they are in London. True, they are at the fountain head of wealth and knowledge, but it must also be remembered that the agglomeration of cities called London draws to itself the poor, the sick, and the failures from all parts of the United Kingdom. The metropolitan hospitals are not merely metropolitan, they are national, and the time seems to be approaching when they will have to be assisted not only by dwellers in the metropolis but by provincial aid as well. An appeal now before us says: "The hospital is close to the termini of three railways serving the northern suburbs and is consequently most conveniently situated for patients arriving in London by these lines, and from all parts of the country poor patients are sent by their medical advisers for special treatment by our staff." Now here we have one great reason why the hospitals of London are always in debt. They serve not only their own immediate neighbourhood but practically the whole country. In some cases of course this is necessary, but anyone who has ever worked in a big hospital must have seen hundreds of patients who came for relief because in the first instance they had something the matter with them, and also because their complaint afforded an excuse for a trip to London. We can quite sympathise with the needs of many a hospital, but the present state of chronic impecuniosity cannot go on. Either the London hospitals must find some means of confining their ministrations to London people or else the provinces, if the provinces use the charitable institutions of the metropolis, must assist in supporting them.

NAVAL PHARMACIES.

THE problem of the storage of drugs and medical appliances on board men-of-war is one of considerable magnitude and importance, not only from the point of view of the officers and sick-bay attendants whose efficiency and reputations are to a great extent concerned, but also from that of their gallant patients who are clearly entitled to the best possible treatment while suffering from sickness or wounds during their term of service afloat. It has been recently asserted that even with regard to elementary matters the medical equipment of the British Navy leaves much to be desired and possibly in some few of Her Majesty's ships there may be grounds for the charge, but we cannot for a moment believe that in a department so intelligently administered as our Naval Medical Service the remediable blots and lacunæ can be either numerous or extensive. Hitherto in the French Navy it has been the custom to keep the whole of the medical stores in cupboards no two of which are alike as to size or shape, the receptacle in each case having been constructed according to the exigencies of a space grudgingly allotted and all too narrow for the requirements. In order to remedy the confusion, waste, and inefficiency thus inevitably arising, Dr. Rouvier, principal medical officer at Cherbourg, has devised a series of portable *coffres*, or chests, and Ministerial approval having been accorded to them these appliances are to be taken into general use throughout the fleet on and after the 1st of January next. In the *Archives de Médecine Navale* for November Dr. Rouvier gives a brief description of his coffers which are five in number, two for medicine marked respectively *Ma* and *Mb*, two for dressings marked *Pa* and *Pb*, and one for use during an action marked *Fa*. The coffers *Ma* and *Pa* contain all that is necessary for treating 100 men during six months—all, that is, except a few cumbrous articles as well as some bulky non-perishable material for which accommodation has to be provided elsewhere. Each *a* coffer is divided by a horizontal diaphragm. The lower division contains only substances in constant use; the upper division contains a certain number of imperishable articles and also substances less constantly in use, such as silk, catgut, atropine, emetine, refills for ambulance satchels, &c. Coffers *Mb* and *Pb* are simply duplicates of the lower divisions in *Ma* and *Pa*, being intended as a reserve for re-stocking purposes. In addition to their horizontal diaphragms all the coffers are likewise subdivided vertically in order to facilitate access to the contents. When two or more coffers of the same kind are on board a vessel they can be superimposed in such a way that the contents of each face of a combined pair are equal to those of an entire coffer. When only a single coffer is available it can be made to revolve by means of an ingenious mechanical device. The greatest care has naturally been devoted to the stocking of the various coffers, but, as Dr. Rouvier points out, nothing on earth or ocean is stable and sooner or later modifications of the existing arrangements will be introduced. In order so far as possible to provide for this inevitable contingency the internal fittings have been reduced to a minimum and where it was practicable have been made moveable. The partitions between the several phials, pots, &c. (each of which shows the date of its filling), consist of galvanised iron wire so as to provide for a certain amount of elasticity and here and there a few compartments have been left empty for individual preferences. In conclusion Dr. Rouvier informs his readers that he has drawn up a memorandum to accompany his coffers, embracing a system of account keeping, directions for re-stocking, and sundry other matters; but that as ministerial sanction has not yet been notified and his proposals may consequently be altered or even rejected altogether he deems it best to withhold the document for the present.

PROGRESSIVE BONY ANKYLOSIS: "ARTHRITIS OSSIFICANS."

A CONDITION which though not very uncommon in man and the lower animals has not received much attention is bony ankylosis of the vertebræ converting the column in extreme cases into one solid piece—spondylitis deformans. In horses it is not uncommon and is a predisposing cause of fracture. Specimens exist in most museums. Often accompanying this spinal disease is ankylosis of other joints, sometimes of almost all in the body. In an annotation in THE LANCET of Nov. 5th we called attention to a form described by Dr. Pierre Marie and termed by him "spondylose rhizomélique" because the ankylosis affects the spine and the roots of the limbs. That distinguished clinician appears to regard it as a special disease ("une entité clinique très spéciale"); but we fail to see how it can be regarded as anything more than a form, and perhaps only a temporary form, of this previously recognised general ankylosis. No doubt, his clinical acumen has seized one of the types of the disease and very possibly the shoulder and hip-joints are more prone to be attacked or are attacked earlier than other joints. But even according to his description the term "rhizomélique" is not comprehensive, for he mentions limitation of flexion of the knees as a feature of the disease, and swelling of the sterno-clavicular joint as present in one case. The *Journal of Pathology and Bacteriology* (December 1896, and March and June, 1897) contains valuable papers by

Dr. Joseph Griffiths on bony ankylosis in general and on this form, which he terms "universal bony ankylosis or arthritis ossificans," in particular. He gives an analytical table of 20 published cases; in none were all the joints affected; in about half nearly all were. The term "universal" cannot therefore be justified: "general" or "progressive" bony ankylosis would be more accurate. The joints become obliterated and the articular ends of the bones grow together. The disease usually begins in early adult life. The age of onset was from twenty-two months to thirty-four years, in the majority between twenty and thirty years. It is more common in males than in females—14 cases to 4. This should be compared with Dr. Marie's statement of his 7 cases: "All occurred in adult males." The progress of the disease is slow—subacute or chronic; it takes months and even years to involve and fix the greater number of joints in the body. The joints are attacked in succession. In the subacute form there are swelling, fixation, and pain in the joint which subside after weeks or months, leaving the joint fixed but not deformed. In the chronic form there is no swelling, but pain and stiffness occur leading to fixation. There are cases in which almost the whole skeleton is thus joined into one rigid piece of bone; in others the spinal column is the chief, if not the only, seat of disease; in others the limbs alone are involved. From the examination of museum specimens Dr. Griffiths concludes that ossifying arthritis probably commences by the formation of spiculated growths at the articular margins of the bones which bridge over the joint cavity and fuse. These marginal growths differ from the "lippings" of rheumatoid arthritis; they arise independently of the articular surface and are not covered by articular cartilage, whereas the latter are, as it were, a direct extension of the articular end of the bone. Indeed, in ossifying arthritis the marginal growth takes place into the surrounding connective tissue—ligaments especially—and the joints are obliterated centripetally. When fusion has occurred the external ridges of bone tend to disappear, leaving the external surfaces of the bones smooth and even. In this description Dr. Griffiths does not apparently refer to the changes found in the spine; here buttresses of bone are formed connecting the vertebræ and remain permanent. The anterior common ligament may be replaced by a splint of bone. As to etiology, the following exciting causes have been noticed: (1) exposure to cold, wet, and fatigue; (2) worry; (3) gonorrhœa; and (4) injury. In one instance the disease was of congenital origin. The pathology is obscure. Whilst showing differences from rheumatoid arthritis the view that it is allied to, or a form of, that disease has some evidence in its favour. On the other hand, an alliance with an equally obscure disease—myositis ossificans—seems to be feasible. Both diseases consist in abnormal ossification of mesoblastic tissues and both may be of congenital origin. As bone normally develops from connective tissue, may not these changes be regarded as a physiological process becoming pathological by extension?

A HISTORICAL DRAMA BY AN EDINBURGH PHYSICIAN.

THE addition of another name to the list of eminent medical men who have ventured into the highways of general literature is always an event worthy of note and one which cannot fail to arouse much interest in medical circles. It will not only interest *alumni* of Edinburgh to know that a former teacher who is still a Professor is shortly to appear in this *rôle*, but it will interest the profession at large wherever Sir Thomas Grainger Stewart's name is known. The secret has been well kept, for it only begins to be known now when some of the advance copies of his book have been seen. The work in some aspects is ambitious, for it takes the form of a Chronicle Play in blank verse. The theme is a historical one of the time of Mary Stuart and the leading personage is the Regent Moray. Sir Thomas Stewart has entitled his work *The Good Regent* which in itself sufficiently indicates the estimate he has formed of his hero. In the preparatory note he says that he threw the story into its present form by way of recreation during an autumn holiday and he craves indulgence for the "apparently ambitious form in which it appears." We do not for a moment suppose that Sir Thomas Stewart has any ambition to be regarded as a poet but we wish all poets wrote as readable verse as his is, judging from a rather rapid survey of the pages of his work. That Sir Thomas Stewart should have chosen a historical theme and found it in one of the most important and momentous times in the history of Scotland is only what might be expected from a man with the historical tastes and literary faculty which he is known to possess. We meanwhile only give this preliminary notice of a work which will not fail to attract attention on account of its historical representations, on its writer's account, and on account of the form in which it appears. We welcome it, for it is always pleasant to know what a man is beyond what he is as a physician, and the writer of this drama does not fail to show the direction in which he leans and the considerations which appeal to him.

INFANTILE SCURVY AND ARTIFICIAL FOODS.

A DISCUSSION on Infantile Scurvy took place at a recent meeting of the Société Médicale des Hôpitaux, Paris, and is recorded in the *Journal de Clinique et de Thérapeutique Infantiles* of Nov. 17th and 24th. According to M. Netter, who showed a typical case of this disease, its causation has to do not merely with the use of artificial infant foods which has of late years become so general but even with certain modern methods of sterilising ordinary cow's milk. In his own case the child had been brought up on milk which was "maternised," that is, sterilised by heat and deprived of a part of its caseine. He suggests that milk is impoverished by this process and consequently loses its anti-scorbutic properties. M. Comby also showed an example of the disease in a child three months old, and here also the diet had been "maternised" milk. In the absence of any other probable cause in the form of dietetic errors and in view of a very marked improvement followed by a rapid recovery when fresh milk was adopted as the staple food the appearance of scurvy was not unnaturally attributed by both of these observers to the changes produced in the milk by "maternisation." They likewise drew attention to the fact that infantile scurvy though rare in France is much more frequently met with in Great Britain and in the United States of America. The cause assigned for this international disparity is doubtless the true one—namely, that in default of the maternal breast French custom prefers a wet-nurse, while in this country and in America recourse is commonly had to some one of a multitude of infant "foods." M. Variot who also spoke on this subject, while admitting the connexion between infantile scurvy and an artificial diet, stated that he had not found that this connexion existed where the child's nourishment consisted simply of sterilised cow's milk. At the Bellville Dispensary 500 infants were thus fed while under his care and no case of scurvy occurred among them. On the other hand, he had found milk thus prepared to be invaluable as a nutrient in infantile atrophy. Notwithstanding some difference of opinion which is evidently the effect of mutual misunderstanding and more apparent than real, we may therefore conside the views of these various observers as agreed on the essential point in this discussion. For each the occurrence of scurv

in the infant has only one explanation—a faulty, because too artificial, diet. There is indeed no other possible theory of its causation and this is a fact which the practitioner must always bear in mind. At the present time the market is inundated with every conceivable form of milk and milk food, peptonised and non-peptonised, and with meat extracts in addition, all professedly most suitable for the nutrition of infants. There is unquestionably a serious danger that among so many elaborated feeding contrivances a child may miss that simpler chemical product of nature's laboratory for the digestion of which the alimentary canal was particularly intended. It is also noteworthy that in cases where the choice of milk is left to the direction of a medical adviser, where sterilisation is practised in its simplest form, and peptonisation if needed, as it sometimes may be, is carried out under medical direction, scurvy-rickets, atrophy, and most of the other digestive troubles of infancy are conspicuously absent. It should always be remembered that over-refinement in the diet of infants is an error which usually defeats its intended purpose and results in their starvation.

DEATH UNDER CHLOROFORM.

A PATIENT died from the effects of chloroform at the Salisbury Infirmary on Nov. 14th. We are indebted to Dr. F. F. Lee for kindly sending us corrected notes of the fatality. The patient, an alcoholic subject, aged sixty years, was admitted into the infirmary seeking relief for fixation of the hip and other joints the result of chronic rheumatism. He was placed under chloroform and the joints were forcibly moved. He struggled, but no further trouble appears to have arisen on this occasion. He desired after this to have other modes of treatment tried but eventually allowed himself to be again given chloroform with a view to further forcible movements being used. This was four months after admission. On the second occasion of the administration of chloroform the junior house surgeon gave the anæsthetic, but by what method is not mentioned. The patient struggled very violently and eventually passed under the influence of the anæsthetic. The forcible movements were then easily performed. The administrator at the end of the manipulation called attention to the man's condition which was so bad that he appeared as if dead. No doubt this was so as no means adopted to effect resuscitation produced any result. The amount of chloroform given is reported as being 1½ drachms. The post-mortem appearances showed opacity and thickening of the dura mater with adhesion to the skull. The organs were healthy save for adhesion of the capsules to the kidneys. There had been no albuminuria during life. Although the death is attributed to sudden failure of the heart the phenomena recorded seem far more consonant with that form of sudden death in which both the circulation and the respiration fail simultaneously and with extreme rapidity—a mode of death which results from the patient receiving a lethal dose through taking in a too concentrated vapour during struggling. The struggles of a patient commonly arise from "pushing" the anæsthetic—a common mistake even among experienced chloroformists and the bane of less proficient anæsthetists. It is a common error to suppose that a drachm or even less cannot produce chloroform poisoning. It is simply a question as to how dilute the vapour is. Even a few minims volatilised suddenly and inspired in a few deep gasps such as accompany struggling are quite able to be rapidly conveyed to the vital centres and to cause paralysis of the medullary centres and death. Even at the risk of much loss of time it is best to give a low percentage of chloroform vapour and adhere to it. The ease with which the rigid joints were moved was probably the result of the extreme muscular flaccidity following the profound narcosis.

THE CASE OF THE LATE MR. HERBERT KINGSLEY HUNTER.

WE understand that the appeal in this case will be heard at 10.30 A.M on Saturday next in the Lord Chief Justice's Court. The case has excited much interest in the profession on several grounds apart from the point of law to be determined by this appeal—viz., the right of a licentiate of a society of apothecaries to use the title of "Physician and Surgeon." Our readers are aware that the appellant has unfortunately recently died—an event which, in the absence of legal knowledge, we should have expected to end the appeal. But this does not appear to be the case.

A HERO'S DEATH.

INFORMATION has been received of the death of a ship's medical officer owing to a very noble act. The medical officer in question, whose name was Murphy, was serving in a steamer plying between Canton and Hong-Kong. On the voyage a Chinese child fell out of his mother's arms into the sea which was running very heavily at the time. Dr. Murphy immediately plunged in after the child, but the sea was so heavy that it was two hours before he was picked up and he never recovered from his exertions. His death was deeply deplored by all on board. We are far from thinking that there were not many others on board the steamer who would have been perfectly ready to do the same noble act, but Dr. Murphy was the one to whom the opportunity came and we are proud to think he was a member of the medical profession. From accounts to hand we do not know whether the child was saved or not.

THE PENNSYLVANIA SOCIETY FOR THE PREVENTION OF TUBERCULOSIS.

WE have received the report of the above society for the year ending April 13th, 1898. The society has worked quietly with but one end in view—namely, the education of the community in a knowledge of the true nature of phthisis and of the means now considered necessary to control or conquer this disease. The means by which this end is sought to be obtained are: (1) by the publication and distribution of pamphlets; (2) by constant endeavour to induce those in influential positions to use their earnest efforts to prevent the spread of the disease; and (3) by striving to obtain the requisite conditions whereby those early afflicted may be restored to usefulness, or for those far advanced the safeguarding which will prevent the communication of infection to others. We cordially applaud these objects and would draw attention more especially to the last-named clause—namely, the safeguarding of those phthisical patients far advanced in the disease in order to prevent them becoming dangerous to their fellow-creatures. The problem is a most difficult one. The sputum in such cases is often almost a pure culture of tubercle bacilli. Patients of the poorer classes are in a most deplorable condition; they must either remain at home in ill-ventilated abodes, perhaps with many people living and sleeping in the same room, or go to the workhouse infirmary, which they often refuse to do, although these institutions are most excellently managed and in them every attention is given to the comforts of the patients. Owing to want of space the general hospitals are adverse to admitting them and the special hospitals for diseases of the chest refuse "advanced cases," for they consider that more good can be done by attending to the early cases. The workhouse infirmaries, then, are their only resource. The "homes for the

dying" are so few that necessarily but few phthisical patients can gain admission. It is therefore of the utmost importance that the friends of the patients should be made acquainted with the infectious nature of the disease and it behoves every medical man attending such cases to see that due precautionary measures against the spread of the malady are taken, the most important of which are the reception and disposal of the sputa and the treatment of linen which may become soiled by them. These are too well known to our readers to need further explanation.

ATAXY OF THE RIGHT ARM.

DR. OLMSTED gives an account in a recent number of the American *Journal of Nervous and Mental Diseases* of the case of a man, twenty-seven years of age, who suddenly developed diplopia associated later with slight failure of vision. There was apparently weakness of the right external rectus but no change in the fundi. About three months after the onset of diplopia he experienced numbness in the thumb and in the index and middle fingers of the right hand, and a pricking sensation in the right lip and side of the face. There was difficulty in writing. There was nothing significant in his family or personal history. He was a well-developed man with normal gait and appearance and with no evidence of disease of abdominal or thoracic viscera. There was slight lateral nystagmus on deviation; the pupils were equal and reacted normally. The right arm became, several months after he was first seen, distinctly ataxic and there was much impairment of muscular sense and later also of sensation to pain, although tactile sensibility remained unimpaired. The left knee-jerk was active, the right very sluggish, and it was also noticed that on rising suddenly from a sitting to a standing posture there was a tendency to go forward and a little to the right. The fields of vision were markedly contracted for both white and red, the contraction being greater in each temporal field. The fundi appeared to be normal. Dr. Olmsted does not venture on a diagnosis but promises to watch the case and report its future progress.

DIPHTHERIA AT GREAT YARMOUTH.

AN action was heard on Dec. 7th and 8th in the Queen's Bench Division, before Mr. Justice Lawrence and a common jury, in which a tailor named Alexander sued a town councillor and a member of the Sanitary Committee of Great Yarmouth, by name Foulsham, for breach of contract in neglecting to supply a sanitary water-closet to a house which plaintiff rented from defendant. It was alleged that in consequence of this neglect two of the plaintiff's children contracted diphtheria and died. In March, 1894, the plaintiff and defendant entered into a verbal agreement whereby the plaintiff agreed to take the house in question and the defendant agreed to provide a water-closet and to fix it properly. The plaintiff entered into possession of the house and the closet was fixed, but according to the plaintiff the work was improperly done. All the Alexander children were attacked by sore throat and two of them died from diphtheria. The defendant denied the allegations and said that if the drains were defective they were rendered so by the carelessness of the plaintiff. The two children who died had attended the Wesleyan school. The plaintiff said that the drain had been constantly flushed with water. Dr. Dudfield expressed the opinion from what he had heard in evidence that the children had caught diphtheria from bad drains. Mr. Hassall, the sanitary inspector, said that until diphtheria broke out no complaint had been made as to the state of the plaintiff's premises. When he examined the place the drain was blocked owing to want of flushing and the house and yard were very dirty. The fall was quite enough. Dr. Bately, the medical officer of health of Great Yarmouth, and Sir Hugh Beevor, M.D. Lond., gave it as their opinion that the two children had contracted diphtheria from school infection. A bricklayer said that he had found the drain upon one occasion stopped with a house-flannel. The jury found for the plaintiff, damages £250. Counsel for defendant asked for a stay of execution on the ground that the amount of damage proved could not amount in the circumstances to the sum awarded by the jury. A stay was accordingly granted.

A MEDICAL ALDERMAN OF THE CITY OF LONDON.

ON Dec. 8th the ratepayers of the Langbourn Ward met to elect a new alderman in the place of Sir Joseph Savory who has succeeded to the position of Alderman of Bridge Without, vacant by the death of Sir Stuart Knill. Sir John Lubbock nominated Dr. Thomas Boor Crosby who had been a member of the Court of Common Council for twenty-one years. Mr. Fortescue Flannery, M.P., seconded the nomination, and there being no further nominations Dr. Crosby was declared duly elected, the election being unanimous. On Dr. Crosby rising to accept the position he was received with hearty applause. It is with the greatest pleasure that we join our congratulations to those of Dr. Crosby's brother citizens, for it is no small pleasure to us to be able to chronicle the election of a member of our own profession to the ancient and honourable office of an alderman of the City of London. Thomas Boor Crosby received his medical education at St. Thomas's Hospital and qualified as L.S.A. and M.R.C.S. Eng. in 1852. In 1860 he became F.R.C.S. Eng. by examination and in 1862 graduated as M.D. at the University of St. Andrews. He has been President of the Hunterian Society and chose for his presidential oration in 1871 the subject of "Modern Medicine." He is a Lieutenant for the County of London and is in practice, together with his son, at Fenchurch-street. We have lately seen a medical man Chairman of the County Council and we now look forward to the possibility of a member of the same noble profession reaching an even higher post—namely, that of Lord Mayor of London.

MEDICAL RELIEF.

THE last of the course of eight lectures given at the Portman Rooms by various well-known medical men and others interested in charitable work was delivered by Dr. J. B. Hurry on Dec. 9th, the subject being "The Self-supporting Dispensary and District Nursing Association." Dr. Hurry argued that the average working man cannot afford to pay for the expenses of a long illness out of his ordinary wages. Hospitals and Poor-law relief do not entirely meet the want and besides they tend to pauperise those who should possess self-reliance and the wish to do all for themselves that they can. Medical attendance has, it is well known, been for years organised on a provident basis and in Dr. Hurry's opinion the time has now come for nursing to be provided on the same system. Dr. Hurry's model scheme is shortly as follows. The benefits of the institution can be enjoyed under three conditions. Firstly, those members who were desirous of laying by something against a rainy day could pay in small sums, weekly, we suppose, as an insurance premium in the same way in which ordinary friendly societies are managed. Secondly, persons who have not insured beforehand can become members by paying an entrance fee which should be high enough to make the applicant consider whether it would not be wise in future to become an insuring member by paying in beforehand. Thirdly, cases of emergency can obtain benefit by obtaining a subscriber's letter which should represent a sum equal to

the fee paid by the second class. Dr. Hurry considers that a sum of from 2*d*. to 3*d*. per week would suffice to keep the institution when once fairly started in a satisfactory condition. We think there is a good deal to be said for Dr. Hurry's scheme with the exception of the clause concerning subscribers' tickets, but we are glad to see that he himself says that this should be omitted if possible. One district nurse in a town at any rate is considered able to look after the nursing required for some 4000 persons. The idea, as we have said, is a good one, and if only pains are taken to prevent abuses creeping in it is one well worth a trial. Of course, all profits after payment of necessary expenses must be divided *pro ratâ* between the medical officers and the nurses, and also there should be some arrangement whereby any medical practitioner in the town or district could be on the staff of the institution if he so wished. With these safeguards we think the organisation of such a scheme would be of great value.

LUIGI GALVANI, the great anatomist of the Bolognese school and better known for his discovery of animal electricity, received on Sunday, Dec. 4th, at Bologna the honour of a centenary celebration—that of his death which took place on Dec. 4th, 1798. The occasion evoked the presence of the leaders of the local medical school and its orator was Signor Erminio Vitta, representing the committee of Italian telegraphists now organising a similar commemoration of Alessandro Volta. The proceedings were highly successful.

AT a meeting of the Childhood Society held at the Parke Museum, Margaret-street, on Dec. 8th Dr. Henry Rayner delivered a lecture on the Early Recognition and Treatment of Mental Condition, in the course of which he dwelt on the many signs of mental disorder in children and advocated the establishment of centres where young imbecile children could be received for a short time under efficient nurses who would be able to demonstrate to their parents how much good might be done by proper care.

A PRIVATE meeting of the National Association for the Prevention of Consumption and other Forms of Tuberculosis will be held at Marlborough House on Dec. 20th, under the presidency of His Royal Highness the Prince of Wales, to further the objects of this association. Lord Salisbury and Lord Rosebery are expected to be present.

THE case of Thomas George Senior, one of the "Peculiar People" who was found guilty in November last of manslaughter, came before the Lord Chief Justice and other learned judges in the Court for the Consideration of Crown Cases Reserved on Saturday last when the conviction was affirmed.

LIEUTENANT WARK, who was convicted last Saturday in Liverpool of procuring a criminal abortion, was sentenced to death, but as all our readers know, has since been reprieved. We defer comments upon the case until we know what sentence the convict is to receive.

MR. VICTOR HORSLEY will address the Manchester Medico-Ethical Association on the business done at the recent meetings of the General Medical Council this afternoon (Friday, Dec. 16th) at 4 P.M. in the Memorial Hall, Albert-square.

PRINCESS LOUISE on Dec. 7th opened two new wards in a wing which at a cost of £18,000 has been added to the West London Hospital.

QUACKS AND ABORTION:

A CRITICAL AND ANALYTICAL INQUIRY.

II.

WITH regard to the scope of our articles upon this subject we wish it to be understood that it does not include questions of what are known as Malthusian doctrines and the limitation of families, and that we do not touch upon these except to point out that the strong temptation to avoid maternity, if possible, does not only affect unmarried women who have to face the shame attaching to unchastity, and is not confined among married women to those who merely regard the bearing of children as irksome and painful and possibly expensive. There are large numbers of married people among the "domestic" class, a class not likely to reason or hesitate in such matters, who hold situations dependent upon their having no families, or "no encumbrances," as their employers term it in advertising for them. It would be out of place here to protest at length against this practice. We allude to it in order to emphasise the point that the incentive to purchase what seems an easy way out of hopeless trouble is very strong with a class not well able to resist it and we repeat what we have already said, that in our opinion quack medicines sold as curing "obstructions, irregularities, and suppressions" and advocated upon the same page as rubber preventives, check pessaries, vaginal injections, and the like must be bought frequently by women who believe that they are buying abortifacients and nothing else.

The men referred to in our first article on this topic as charged with blackmailing women and other offences are at the time of writing awaiting their trial at the Old Bailey; we cannot, therefore, comment on their case except to say that the evidence already given at the police-court serves to illustrate many of the evils which result from a traffic that has long gone on. That these evils must result seemed so probable to us that we undertook this inquiry in order that there might if possible be no question in the matter, while the arrest of these particular persons has rather delayed the publication of our articles than otherwise. In case we may be thought to labour our points and in case it may be suggested that neither the advertisements nor the trade will now continue, we must point out, firstly, that both advertisements and trade have flourished for many years, although most people would have thought that their character was obvious and that the meaning of an invitation sufficiently plain to attract the attention of ignorant young women would equally have arrested that of newspaper proprietors and of the police. Secondly, since the trial of the case of Owen *v.* Greenberg, to which we shall refer later, no important diminution in the number of these advertisements has been noticeable in spite of the attention then called to their character.

We now proceed to give the analysis of certain of the pills and potions which we have purchased in response, primarily or secondarily, to advertisements appearing in the public press. At the same time where they seem germane to this inquiry we print extracts of the correspondence which has taken place with the advertisers. For purposes of convenience in summing up our results and comments we place different letters of the alphabet at the head of each case as we consider it.

A.

The following advertisement has been given already in full last week:—

> Ottey's Strong Female Pills quickly and certainly remove all OBSTRUCTIONS arising from any cause whatever, where Steel and Penny Royal fails. Invaluable for married women. By post, under cover, for 14 and 33 stamps, from THOMAS OTTEY, Chemist, 32, Hagley Road, Birmingham.

We have good reason to believe that this particular advertisement has been very widely distributed. Our first letter to the advertiser simply enclosed 1*s*. 2*d*. in payment and asked for a box of strong female pills as advertised, requesting that they might be so packed as to be safe from observation, the purchaser being represented as a servant and unmarried. In reply to this we received the box

of pills the analysis of which we give below. It was accompanied by two or three printed sheets extolling various specifics of an innocent character as well as the "female pills." A separate sheet is entitled a "check circular" and recommends taking the pills before and after sexual intercourse with a view to preventing conception, while another leaflet deals with them in considerable detail, giving directions for their general use as emmenagogues and for other purposes as well. These directions precede a paragraph, headed in large capitals "For married women," in which the dosage and diet for these patients are more or less elaborately laid down. Then follows the following sentence heavily underlined, "After success the pills should be taken regularly, exactly same as check circular," and attention is called to "Extra Strong pills" for very obstinate cases at 5*s*. 3*d*. and to "The Strongest" at 10*s*. Further quotation or comment, however, on the objects for which the pills are sold is rendered unnecessary by a slip of paper which was wrapped round the box. On this we find in manuscript the following recommendation:—

If these don't do all you wish send for the Extra Strong Pills at 5s. 3d., or The Strongest at 10s. per box, and say how far over. If these don't do it the Strongest will shift anything.

Wishing to test this advertiser's "Strongest" pills and in order that there might be no question in his mind as to the purpose for which they were required, a second letter was written enclosing 10*s*. and stating that the sender believed herself to be four months advanced in pregnancy. If anyone should find in our conduct here matter for unfavourable comment on the ground that we have tempted Mr. Thomas Ottey to sin we have to say that we found in him so willing an accomplice that we can hardly have been his seducers and, secondly, that it is useless to fight a certain sort of stink with rose-water. The pills sent in reply to our second letter were accompanied by similar printed matter to that sent with the first instalment of pills, by printed directions for taking this "Extra Strong" and "Strongest" pills and by another slip of written matter in the same handwriting as the first. We quote without comment a passage from the printed sheet and the whole of the written slip:—

Print: "..... continuing the treatment until the usual signs of success (slime, jelly stuff, streaks of blood either *front* or *with the motions back way*, with strong forcing pains, backache, pains in the limbs, etc.) have been present six or eight days running, when a foot-bath and a dose of Composition Tea or Holland's Gin may sometimes be found useful, though they are not necessary. When the Pills have effected the desired relief, the periods usually commence again, from five to eight weeks afterwards, sometimes earlier. The Pills are certain if taken long enough, and after success should be used regularly by all patients *exactly* same as Check Circular to prevent future trouble, prevention being much better than cure.

Written: "You are at a most difficult time, still the pills will do it if the internal organs are right.

"We don't expect it as courses so try to get heavy forcing also streaks, clots, strings, bits of skin-flesh, all back way 14 days running, then you will be safe."

The following is an analysis of the pills:—

(*a*) Pills sent in response to our first communication and presumably

OTTEY'S STRONG FEMALE PILLS.

Moisture, 17·24 per cent.
Mineral matter, 24·73 per cent., consisting chiefly of iron.
Organic substances, 58·03 per cent.

An aqueous extract of these pills was exceedingly bitter to the taste and of a light yellow colour. From this extract chloroform dissolved out an intensely bitter principle which yielded in a very satisfactory way colour reactions which were absolutely identical with a pure colocynth residue.

There was no evidence of aloes or of any volatile oil.

The directions sent with these pills were as follows:—

For married women. Take three or four Pills for a dose three times a day, using a foot-bath and taking a dose of Composition Tea once or twice a week.

(*b*) Pills sent in response to our second communication and presumably

OTTEY'S "THE STRONGEST" PILLS.

Moisture, 16·60 per cent.
Mineral matter, chiefly iron, 22·16 per cent.
Organic matter, 61·24 per cent.

These pills are substantially the same as (*a*) with the very important difference that they were found to contain savin oil. The quantity of savin oil amounted to not less and probably more than 34 minims per 100 pills. Thus 12 pills contain slightly more than the maximum dose of this irritant oil as laid down in the 1885 Pharmacopœia.

The directions for taking these pills and also the Extra Strong Pills were as follows:—

Commence after breakfast or that part of the day which is found most convenient and least likely to cause purging in the night and take four pills three or four times a day between meals (some can take the doses best between tea time and very late at night), gradually increasing the dose until twenty-four pills are taken daily.

* * * * * *

Patients who are not able to undergo the proper full treatment should take only twelve or what number they can bear (very many even win by only taking from four to six of the best pills every night at bed-time) of the strongest pills daily until successful, taking three or four pills for a dose every three or four hours.

We conclude our present notice of Mr. Thomas Ottey's wares by quoting from Squire's Companion to the British Pharmacopœia (sixteenth edition) certain references to savin, a scheduled poison which may only be sold under the well-known conditions that the vendor be a pharmaceutical chemist or a medical man and that the purchaser sign a book with his name. Under the head of "medicinal properties" we find there, "A powerful local and general irritant ..... a powerful emmenagogue." Under the head of "Savin Oil" we find the dose set down as one to four minims. In the therapeutical classification of remedies at the end of this well-known book of reference we find "savin" described as one of the substances "which promote the contraction of the uterus and facilitate the expulsion of the contents." Savin is not included in the British Pharmacopœia any longer, but in the edition published in 1885 the maximum dose of the oil is given as four minims.

B.

The advertisement in this case was as follows:—

Married and Single Ladies should send at once for FREE ADVICE and information of Priceless Value. Address in confidence:—PROFESSOR LESLIE, 34, George-street, Chester.

Our first letter simply invited the "free advice and priceless information."

In reply we received sundry printed documents and a letter which we reproduce in full:—

34, George-street,
Chester.

DEAR MADAM,—Yours to Hand in reply I Enclose you my Price Lists etc. should you Require my Remedies I should strongly advice you to try my 10*s*. 6*d*. Mixture although the 4*s*. 6*d*. Packages is very good in slight causes Will you kindly favour me with a few Particulars I should then be Better able to advice you Which Whould be Held in strict Confidence. Awaiting your Reply

Yours Respectfully
J. LESLIE.

To this person we wrote again, enclosing 10*s*. 6*d*. and asking for a bottle of remedy, the writer being represented as probably about three months gone with child. Instead of the bottle ordered we received in reply the following letter which again needs no comment from us:—

George-street,
Chester.

DEAR MADAM,—Yours to Hand with 10s. 6d. Enclosed I am sorry things are so far gorn I am afraid this wont do it But why not try a Larger Case You know things are far gorn But still not to Late I should recomend you a Larger Case it Whould Be More Certain that is I could send you four Large Bottles for 30/1/6 thirty-one Shillings and Six Pence it Whould be certain and Cheaper as by Having the four you Whould Be saving the 10/6 Now Just consider this Over as you cannot Let things go much further it Whould be to Late if you Deside to Place your Case in my Hands send the Postal for £1 1s. 6d. one pound one and sixpence I will then send You four Large Bottles that whould Be More Certain to act Of course if you only wish the 10s. 6d. Bottle I can send it On at Once But I should strongly recomend the Larger Case Will you at the Same time Kindly imform me when Writing if you are married or single and what age are you etc. so that I can Better understand your Case

I may mention that all Letters sent to me are strictly confedental
Awaiting your Reply
Yours faithfully
J. LESLIE.

P.S. Do you think you could Pay me a visit if so kindly say as I take an interest in all my clients and will endover to Do my Best for you My 10s. 6d. bottle is very strong But I am afraid the one wont Be enough But four will be certain in any case.

Our reply to this was to the effect that the person requiring the "remedy" was thirty years of age and married. The sum of £1 11*s*. 6*d*. was enclosed and we note that the fact that we inadvertently sent 10*s*. too much is not remarked upon in "Professor" Leslie's reply. Three bottles duly arrived at intervals of a day or two, the first bottle being preceded by another letter, which we reproduce:—

George-street,
Chester.

Dear Madam,—Yours to Hand With Postal Order Enclosed, By Return I am forwarding you a Package of My remedies I Have Made

the two Bottles into One the remainder of the remedy I shall send you On Tuesday, I am sending them this way so that it will arrive safe to you through the Post and not Look to Bulky as I think it will Be Best Kindly Let me Know when you are well again

Yours Faithfully
J. LESLIE.

P.S. Parcel Tuesday with further Directions.

The last bottle of the "case" was accompanied by a further communication which we reproduce:—

Chester.

DEAR MADAM,—I am sending you the Last of the Case You Should Be Well again By the time you finish this Bottle Will you kindly Let me know How you are So that I can advice you, Can you Write By Return and Just state How you feel, &c.

& Oblige
yours truly
Kindly take Enclosed as Before J. LESLIE.

Analysis of the FLUID contained in the three Bottles sent by "PROFESSOR" LESLIE.

This is an opalescent, slightly yellow fluid, in appearance not unlike weak tea. It is safe to say that it contains more than 98 per cent. of water. On boiling a strong smell of senna was evolved, and satisfactory evidence of senna was obtained on applying certain chemical tests. Ether extracted a trifling quantity of material which had a characteristic smell unmistakeably like rue. The results of the examination in short suggest that this liquid is senna and rue tea.

The specific gravity of the fluid was 1004, the amount of extractives was 0·31 per cent., of which 0·07 per cent. was due to alkaline carbonate and 0·21 per cent. to organic substances.

On burning the extractive matters a smell exactly like the fumes of a leaf extract when smouldering was evolved.

The liquid after a few days developed a mould after the manner of infusions of the kind indicated by the analysis.

It apparently contained no aloes.

Extracts with chloroform yielded no specific substance—i.e., of the nature of an alkaloid or bitter.

No difference could be traced in the composition of all three specimens except that the third one sent contained peppermint oil. This specimen was therefore more stable than the rest owing to the antiseptic action of the peppermint.

We shall continue next week an analysis of various pills and potions received in the course of this inquiry.

THE ROYAL COMMISSION ON THE METROPOLITAN WATER-SUPPLY.

THE fortieth sitting of the Royal Commissioners was held at the Guildhall, Westminster, on Dec. 12th. The Commissioners present were Lord Llandaff, Sir John Dorington, Sir George Barclay Bruce, Major-General Scott, Mr. de Bock Porter, and Mr. Robert Lewis. Mr. Cripps, Q.C., was also present for a short time. The first part of the sitting was occupied by the cross-examination of Mr. Middleton which was concluded. The only other witness examined was Mr. Walter Hunter who put in a large number of tables giving his estimates of the comparative cost of an increased supply of water from Wales and from the Thames. Mr. Hunter's tables were not prepared on actually the same lines as those of Mr. Middleton. The witness's chief contention was that 100 million gallons a day was a sufficient amount of water to flow over Teddington weir and he gave it as his opinion that no harm would be done if the metropolitan water companies were allowed to take all in excess of that amount.

In answer to the CHAIRMAN Mr. HUNTER said that he was a member of the Institute of Civil Engineers and of the Institute of Mechanical Engineers; that he was the engineering director of the Grand Junction Waterworks Company and joint engineer of the Staines Reservoirs Joint Committee; that he was in practice as a civil engineer in Westminster and was formerly a member of the London County Council when he represented that body on the Lee Conservancy Board. In conjunction with Mr. Alexander Fraser he was the author of a memorandum which was laid before Lord Balfour's Commission. This memorandum recommended the Staines reservoir scheme and received the approval of Sir Frederick Bramwell and of Mr. Thomas Hawksley. The principle of the scheme which he had recommended was that water from the Thames should be taken when there was an abundant flow and used as occasion required. The witness said that in his opinion it would be less costly to increase the amount of storage capacity and take the water from the Thames than it would be to bring up a new supply from Wales. The question of the relative cost of these two schemes would naturally not be affected whether the undertakings were purchased and put in the hands of a single authority or whether they remained as they are at present in the hands of the water companies. The witness said that in his opinion it was not necessary to allow flood water to run to waste for so long a period as fifteen days; he believed that the suggestion that no water should be taken after a flood for this lengthened period was due to a communication received from the Local Government Board. He did not know whether the communication was made by Major-General Scott or by some other authority on the Local Government Board. The communication was not an official one but was given in a private letter to his colleague Mr. Fraser. In his own opinion the witness said it would be sufficient to avoid taking flood water for a period of two days, but in deference to the general opinion that a longer period was necessary he had taken six days as the basis for his calculations. Sir William Crookes and Professor Dewar (who are employed by the metropolitan water companies) said in their report for November, 1898, that the bacteriological quality of the London water does not depend upon the rejection or the use of flood water but upon the efficiency of filtration. The witness contended that as much water as possible should be taken during periods of flood so that the flow of the river might be equalised. In his opinion water of dark colour like that supplied to Manchester would not be popular in London and he thought that if it were supplied it would give rise to a popular outcry. The CHAIRMAN suggested that the peaty colour of the water caused no harm and Sir JOHN DORINGTON suggested that the colour of water might be a matter of taste. The witness contended that a flow of 200 million gallons of water daily over Teddington weir was not required.

In answer to Major-General SCOTT he declined to give an opinion as to the result a lessened flow would have with regard to the growth of weeds in the bed of the upper river.

Sir JOHN DORINGTON suggested that the river as a pleasure resort would be less pleasant if the river were sluggish, although he admitted that it would be easier in that case to row up stream. The witness contended that a reduction of the flow of the river from 200 million gallons to 100 million gallons daily would make no practical difference with regard to the scour produced by the passage of water in the lower reaches. Since the early part of the present century the scour of the river had been greatly increased, first by the removal of Old London Bridge and of late years by the Thames Embankment. During last summer the flow over Teddington weir had been reduced to 42 million gallons daily but he had not heard of any complaints.

Mr. DE BOCK PORTER asked the witness whether the companies should in his opinion forego the right they had of taking water when by doing so they reduced the flow to a less amount than 100 million gallons daily. The witness replied that he did not think the companies would forego anything.

With regard to the diminished flow of water this summer the CHAIRMAN said that they had it in evidence that penny steamers had gone aground and he gave it as his opinion that that must have been inconvenient for them.

At this point a number of tables were put in although the CHAIRMAN remarked that he thought that they had already enough tables for an ordinary mind.

In answer to the CHAIRMAN the witness said that the estimates which he gave in his tables with regard to the cost of the Welsh scheme were made from analogy and not as the result of a survey. The witness admitted that he had not seen the country and the CHAIRMAN asked him if he were not tendering unreliable material to replace "good material" which had been supplied as the result of actual surveys.

The forty-first sitting of the Royal Commissioners was held at the Guildhall, Westminster, on Dec. 13th. The Commissioners present were Lord Llandaff, Sir John Dorington, Sir George Barclay Bruce, Major-General Scott, Mr. de Bock Porter, and Mr. Robert Lewis. The first part of the sitting was occupied by the cross-examination of Mr. Hunter and the latter part of the evidence of Sir Frederick Bramwell.

Sir FREDERICK BRAMWELL, in answer to the CHAIRMAN, said that in his opinion neither the London County Council nor a body of experts would manage the London water-supply better than the present companies. He was opposed to compulsory purchase of the water companies' undertakings. In the purchase price an allowance would have to be made for progressive increase of dividends. In the case of the West Middlesex Company the witness admitted that of course there could be no increase as the company was already paying at the full maximum amount allowed by Parliament. He did not think that the values of the undertakings could be properly determined on the basis of the present dividends in those cases in which companies were not paying the full amount allowed.

In answer to the CHAIRMAN he admitted that in the case of a company such, for example, as the East London in which it would be necessary to increase the amount of storage reservoirs and in which therefore an unremunerative outlay must necessarily be incurred—such a fact would depreciate the value of the undertaking. The witness, however, contended that if it appeared that a company would in course of time extend its business he thought that the possible future dividends should be taken into account.

The CHAIRMAN suggested that surely in the case, for example, of a railway which was purchased it would not be fair for the company to say that they might be able to extend the line in different directions and that this would bring in a large increase of dividends and that the present undertaking was worth more on that account. The witness thought that an arbitrator would have to listen to such a suggestion, but he was not prepared to say what importance he would attach to it.

The CHAIRMAN suggested that there appeared to be an opinion that the East London Company had not displayed due foresight in providing a sufficient storage amount of reservoirs. The witness pointed out that Professor Stuart in the House of Commons had violently opposed the scheme for the increase of the storage reservoirs and that he had in making that speech represented himself as speaking the voice of the London County Council. One learned counsel proposed to read the speech but the Commissioners did not wish to hear it. The witness thought that the provisions of the sinking clause first introduced by Lord Claud Hamilton and which was now always introduced into Bills for raising capital became rather unfair to the companies when the money was raised rather for the improvement of the undertakings than for the benefit of the shareholders of the company.

Towards the end of the sitting some questions were asked with regard to control and the witness said that in his opinion the water examiner, Major-General Scott, ought to be allowed to visit the companies' works as a matter of right and not simply as a matter of courtesy. The witness, however, thought that officials of the County Council, with the exception possibly of their medical officer of health, ought not to be allowed to overrun the private works of the companies. In support of this opinion he related a case of a very filthy representative of a local authority in the country who was sent to take a specimen of the water and he thought that such a person would not be likely to have the necessary skill to take a sample of water. This incident, the witness appeared to think, bore on the question of visitations of the companies' works by county councillors. The witness said that in his opinion the Acts of 1847, 1852, 1871, and 1897 afforded ample protection to the water consumers of London.

The CHAIRMAN remarked that it had unfortunately been strongly borne in upon them that no one apparently paid any attention to ensure the protection which these various enactments were intended to supply to the water consumers of London.

The next sitting of the Royal Commissioners will take place on Monday next, Dec. 19th, and the CHAIRMAN intimated that another sitting would take place on the following day if they could ensure a continuous supply of witnesses.

ELECTRIC LIGHTING AT CARDIFF.—The arc lamps in St. Mary-street and also the incandescent lights in the town-hall went out recently at a time when the stipendiary magistrate was trying a case, the coroner's court was sitting, and the municipal offices were busy. The police-court case was adjourned, but the coroner and jury resorted to candles until the electric light was again available.

THE PROPOSED SCHOOL OF TROPICAL MEDICINE.

THE following letter has been addressed to the *Times* and should go far to instruct the general public, as we have taken pains to inform the medical profession, upon the merits of the scheme which has been put forward for the foundation of a school of tropical medicine:—

To the Editor of the TIMES.

SIR,—The proposed scheme for affording additional instruction in tropical medicine has attracted attention to a subject with which the medical profession entirely sympathise. That physicians and surgeons who propose to practise in hot climates should have an opportunity afforded them for the special study of tropical diseases is no doubt most desirable not only on the ground of humanity, but also as a duty to British subjects resident in the tropics. Having regard, however, to the scheme as detailed in the Colonial Office circular, dated the 9th ult., there are several points bearing on its practicability and prospect of success which require careful consideration before it is finally adopted.

The scheme is very costly. It is estimated that the initial outlay will be £16,460 and that the annual cost of maintenance will be £3000. Towards the first item the Colonial Office contributes £3500, and it is estimated that the Colonial Medical Service candidates will contribute £1000 to the latter. This leaves a capital sum of £12,960 and £2000 per annum to be raised from the public. Fees from students would partly defray the yearly expenditure, but it is doubtful whether such sums can be procured from either or both sources.

A memorandum and circular are now being circulated by the Seamen's Hospital Society which state that the school is intended for medical graduates only. Of these candidates for the Colonial Medical Service will form a part and it is anticipated that missionary societies, trading corporations, and private practitioners connected with the tropics will avail themselves of the opportunities offered by the proposed school. The number of students expected to be forthcoming is not stated, and it is well to consider whether additional facilities to those already existing are required before incurring the contemplated heavy expenditure.

The candidates for the Colonial Medical Service could be instructed at Netley where the Royal Victoria Hospital affords more material for clinical instruction than can be obtained anywhere else and has a staff of teachers practically acquainted with tropical diseases as well as an excellent bacteriological laboratory. There seems to be no reason why these candidates should not go through a four months' residential course at Netley and obtain the advantages which its hospital and school now afford to candidates for the Army and Indian Medical Services. It appears to us that candidates for the Colonial Medical Service might fairly be required to pass through this course as a qualification for appointment.

Medical men connected with missionary societies and trading corporations, along with those who in a private capacity propose to practice in the tropics, have open to them for the special study of these diseases the London and provincial schools of medicine where the subject is already taught. Many of these are provided with bacteriological laboratories and all that is required for academic teaching. For clinical work the material afforded by the *Dreadnought* and its Branch (the former is much more accessible) is available for those residing in London, while those resident in the provinces have valuable opportunities in this respect at such ports as Liverpool, Newcastle, Bristol, and other places. It must not be overlooked that the diseases of hot climates are included in the lectures on the practice of medicine given at every medical college and school in the kingdom. It appears therefore that sufficient means of instruction already exist and the large initial outlay and costly maintenance of the proposed school and hospital are consequently uncalled for.

In the published correspondence between the honorary medical staff and the committee of management of the *Dreadnought* Hospital it is stated in Mr. Michelli's letter, dated July 14th, that "the committee will propose, as far as possible to concentrate cases of tropical disease at the teaching centre." We are informed that

this has been already done to some extent, for the Albert Docks branch has detained patients who were originally intended to be passed on to Greenwich and the parent institution has therefore been depleted in order to feed its branch. This seems to be very undesirable in the case of the *Dreadnought* with its past traditions, and the more so because the cases of tropical disease in that hospital have been used already for teaching purposes in connexion with one of the London schools.

It is, we think, unfortunate that the Secretary of State for the Colonies did not consult such an authority as the Royal College of Physicians as to the best method of giving effect to the scheme before it was made public, and it is much to be regretted that the Committee of Management of the Seamen's Hospital Society neglected to consult their senior visiting medical staff on a matter so seriously affecting themselves and the usefulness of the hospital at Greenwich.

We are, Sir, your obedient servants,

WM. ROBERTS, M.D., F.R.S.
DYCE DUCKWORTH, M.D., LL.D.,
Physician and Lecturer on Medicine, St. Bartholomew's Hospital.
J. FAYRER, M.D., F.R.S.,
Consulting Physician, Charing-cross Hospital.
WILLIAM M. ORD., M.D. Lond., F.R.C.P.,
Consulting Physician to St. Thomas's Hospital.
W. S. CHURCH, M.D., F.R.C.P.,
Senior Physician, St. Bartholomew's Hospital.
W. R. GOWERS, M.D., F.R.S.,
Consulting Physician, University College Hospital.
I. BURNEY YEO, M.D., F.R.C.P.,
Senior Physician to King's College Hospital and Professor of Medicine in King's College.
FREDK. T. ROBERTS, M.D., F.R.C.P.,
Professor of Medicine at University College; Physician to University Hospital.
A. ERNEST SANSOM, M.D., F.R.C.P.,
Physician to the London Hospital and Lecturer on Clinical Medicine to the London Hospital.
THOMAS BUZZARD, M.D., F.R.C.P.,
Physician to the National Hospital for the Paralysed and Epileptic.
W. B. CHEADLE, M.D., F.R.C.P.,
Senior Physician to St. Mary's Hospital and Lecturer on Clinical Medicine.
THOS. WHIPHAM, M.D., F.R.C.P.,
Physician to St. George's Hospital.
W. CAYLEY, M.D., F.R.C.P.,
Physician to the Middlesex Hospital.
G. FIELD BLANDFORD, M.D., F.R.C.P.,
Lecturer on Psychological Medicine, St. George's Hospital.
F. DE HAVILLAND HALL, M.D., F.R.C.P.,
Physician to the Westminster Hospital.

Dec. 14th.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council was held on Dec. 8th, the President, Sir WILLIAM MACCORMAC, Bart., being in the chair.

A report was read from the Board of Examiners in Dental Surgery recommending the Council to express their approval of the recommendations of the General Medical Council as to the course of study and examination for Licences in Dental Surgery, as the recommendations appeared to be in all important particulars similar to the regulations of the College. The Board did not advise the issue of schedules defining the range of examination in anatomy and surgery, as in their opinion it would probably lead to a system of cramming. The report was adopted.

The Council also adopted a report from the Committee of Management. It contained the synopsis of practical pharmacy based on the new Pharmacopœia and intended to come into force on May 1st, 1899, it recommended that the examination in materia medica and pharmacy applicable only to candidates under the old regulations should be conducted in future in *viva voce* only on account of the small number of candidates now eligible under those regulations; and the committee requested that in consequence of a desire expressed by the teachers and examiners in physiology that there should be an examination in practical physiology they might be empowered to consider the question, to take the opinions of the several medical schools, and to report to the College on a future occasion.

The Council having been informed that the name of a Member of the College had been erased from the Medical Register called upon the Member to show cause why he should not be removed from being a Member of the College.

A letter was read from Sir William Turner, President of the General Medical Council, enclosing a copy of two clauses drafted with the object of amending the Medical Acts so as to prevent persons whose names have been erased from the Medical Register for a criminal offence or for professional misconduct from using any title, diploma, or degree so long as the erasure remains in force, and inquiring whether such clauses are approved by the Council of the College. The matter was referred to the Discipline Committee.

The PRESIDENT reported the proceedings at the annual meeting of Fellows and Members and stated that in addition to 15 members of the Council there were present 17 Fellows and 75 Members.

The first resolution which was carried at that meeting and which requested the Council to attempt to remedy the notorious abuses existing in connexion with medical practice, was referred to the Discipline Committee.

The second resolution which requested that the Members should be allowed to have some share in the election of the governing body was considered and it was resolved that "The Council do not consider it either necessary or desirable to reopen the question of the representation of Members on the Council after the large share of attention which the Council have of late given to the matter and after the result of the recent canvass of the Fellows."

The third resolution which requested the Council to express its disapproval of Fellows and Members of the College acting as the paid officials of any association which employs professional advertisements was referred to the Discipline Committee.

The fourth resolution which referred to the granting to the Members' permission to wear a gown was referred to the Committee for General Purposes.

A letter was read from the Board of Trade stating that owing to the recent revision of the British Pharmacopœia the medical scales issued by them for merchant and passenger ships will require to be amended, and asking the Council to nominate two representatives, as they did in 1888, to serve on a committee to be appointed for the purpose of revising the scales.

Mr. Alfred Willett and Mr. Richardson Cross were nominated as representatives.

The SECRETARY laid before the Council an invitation from the Imperial Military School of Medicine at St. Petersburg asking the College to send representatives to the celebration of its centenary at St. Petersburg on Dec. 18th, 1898. Two members were nominated.

The PRESIDENT reported the delivery of the Bradshaw Lecture by Mr. T. Pickering Pick on Dec. 7th, the subject being "The Union of Wounds." The best thanks of the Council were given to Mr. Pick for his lecture and he was requested to publish it.

A letter was read from Mr. THOMAS BRYANT reporting the proceedings of the General Medical Council and he received the thanks of the Council for his services as the representative of the College.

Mr. HENRY MORRIS moved:—

That a committee be appointed to consider and report whether any change, and if so what change, should be made (to the advantage both of the College and of the candidates) in the conditions under which candidates are admitted to the examinations for the Fellowship of the College.

A committee for this purpose was appointed.

PUBLIC VACCINATORS AND THE NEW VACCINATION ACT.

PUBLIC VACCINATORS AT UPPINGHAM.

THE public vaccinators of the Uppingham Union held a meeting at the house of the senior practitioner on Dec. 7th, and having agreed upon the terms which they considered satisfactory under the provisions of the new Vaccination Act

met the guardians and obtained the following fees:—General Order Vaccination Acts 1867–1898, Amended Regulations: Page 14, Section 1, 2*s.* 6*d.*; Page 15, Section 2, 10*s.*; Section 3, 5*s.*; and in the event of any child having been successfully vaccinated and requiring, as the result of such vaccination, further attendance after the visit of inspection a fee of 2*s.* 6*d.* for each visit, to include medicine. The public vaccinators to pay all postage. The guardians met their officials in a business-like manner and gave a very courteous hearing to their side of the case.

THE METROPOLITAN HOSPITAL SUNDAY FUND.

THE annual general meeting of constituents was held on Monday, Dec. 12th, at the Mansion House, when the Right Hon. Sir JOHN VOCE MOORE, Lord Mayor, President and Treasurer of the Fund, presided.

The Bishop of STEPNEY proposed the adoption of the annual report (details of which will be found in THE LANCET of Dec. 3rd, p. 1501). In doing so he said that everyone felt that this Fund was one of the most business-like funds that we have in London. From his experience it was also the one which appealed most to the working men of London. Over £40,000 had been collected this year but he hoped that everyone would strive to do their best to increase that sum next year.

The Rev. W. H. HARWOOD, in seconding the motion, said that in making his appeal to his congregation he had followed the example of Canon Fleming and had called attention to the collection previously to its being actually made.

The report having been adopted, Mr. RICHARD B. MARTIN, M.P., moved that the Laws of the Constitution be continued, and took occasion to appeal to ministers of all denominations not to allow any part of the collections made on Hospital Sunday to be put aside for other purposes.

Sir EDMUND HAY CURRIE seconded the motion which was subsequently adopted. Some discussion, however, took place, Mr. FREDERICK NORTON asking that the proportion of the collection given to dispensaries should be increased. The Prince of Wales's Fund did not include dispensaries in its distribution, and consequently the hospitals received awards from both funds and the dispensaries from only one.

The Earl of STAMFORD, referring to the appointment of an inquiry officer in the out-patient department of hospitals, suggested that the inquiry officer should not only weed out those applicants who were not entitled to hospital charity but should, he said, be qualified to see that patients if they required treatment got it elsewhere.

Dr. GLOVER expressed his sympathy with the remarks of Mr. Norton. He had himself noticed the very attenuated amount given to dispensaries, and although he did not think it desirable to propose an amendment he thought the matter should be taken notice of by the Council.

Ex-Sherriff COOPER and the Rev. Prebendary WHITTINGTON respectively proposed and seconded a motion to the effect—

That the Council for the year 1898 be re-elected for the year 1899 with the Right Honourable the Earl of Aberdeen, Lord Lister, Sir Horatio D. Davies, K.C.M.G., M.P., and the Rev. Walford Green to fill vacancies.

This was carried and

Canon FLEMING proposed:—

That June 11th be fixed for Hospital Sunday of 1899 and that the cordial coöperation of all ministers of religion within the metropolitan area be again invited in the usual way.

He said he thought the Fund was educating more and more the public of all classes to see the necessity for and the needs of hospitals. He hoped that the day was far off when voluntary philanthropy would be superseded by State aid.

The Rev. Canon GRAHAM seconded the proposal which was carried.

Mr. COHEN suggested that much good might result if the Lord Mayor sent a letter to the proprietors of large hotels some time before Hospital Sunday asking them to inform their patrons of the date of Hospital Sunday and to make arrangements if possible for collections in such hotels.

The Rev. Dr. HODSON said that the collection would greatly benefit if ministers sent out post-cards to their congregations before the actual day of collection.

The Right Hon. W. LIDDERDALE proposed a vote of thanks to the Lord Mayor, which was seconded by the Rev. Prebendary KITTO and carried with acclamation.

In his reply the LORD MAYOR said he trusted that the highest hopes of the well-wishers of the Metropolitan Hospital Sunday Fund would be realised in his year of office and that he would do his utmost for the good of the Fund.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

Sanitary Administration in the County Borough of West Bromwich, by Dr. G. S. BUCHANAN.[1]—This report might be fittingly entitled "West Bromwich revisited," since it relates to a second inspection of the district made by Dr. Buchanan with a view to ascertain what steps have been taken to carry out the recommendations accompanying his first report in February, 1896, relative to the condition of the borough and the prevalence of enteric fever therein.[2] As is not unusual in the case of insanitary districts, such as West Bromwich, the town council, in response to communications addressed to them by the Local Government Board as to what action they were taking in reference to the inspector's report, appear to have written evasive and unsatisfactory letters. The Board therefore directed Dr. Buchanan to revisit West Bromwich and to report as to the action of the town council. The district in question is one of those in which the inhabitants have a custom of storing up their excrement and house refuse in capacious covered privy-middens sunk below the ground level and so constructed as to allow the escape of their liquid contents. These middens are often dangerously situated near doors and windows and it is hardly to be wondered that enteric fever should from time to time prevail. The action of the town council prior to 1896 had been half-hearted and unsatisfactory and Dr. Buchanan found it necessary to insist that more attention should be bestowed on almost every sanitary subject other than water-supply and main sewerage. It cannot be said that in the period of nearly three years which has elapsed between the inspector's two visits that the town council have made astounding progress, but they have paid attention to insanitary premises and have taken some action as to houses unfit for habitation. So, too, in yard-paving and drainage advance has been made, though makeshift work seems to have been well to the front in this particular; and in respect to middens and privies the town council do not seem to have received much encouragement from the stipendiary magistrate whose decisions are apparently somewhat retrograde in tendency. It is unsatisfactory to learn that the cowsheds are neglected and that certain of the milkshops are in a far from desirable condition. Dr. Buchanan has certainly not dealt hardly with the very obvious shortcomings of the West Bromwich Town Council and it is to be hoped that they will show their appreciation of his consideration by carrying out his recommendations and by proving themselves more worthy of the dignity of a county borough.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6691 births and 3835 deaths were registered during the week ending Dec. 10th. The annual rate of mortality in these towns, which had increased in the three preceding weeks from 17·0 to 19·1 per 1000, declined again last week to 17·8. In London the rate was 16·7 per 1000, while it averaged 18·5 in the thirty-two provincial towns. The lowest death-rates in these towns were 12·4 in Derby, 12·6 in Croydon, 13·2 in Huddersfield, and 13·6 in West Ham; the highest rates were 22·0 in

[1] London: Eyre and Spottiswoode, East Harding-street; Edinburgh: John Menzies and Co.; Dublin: Hodges, Figgis, and Co. Price 1d.
[2] THE LANCET, May 30th, 1896.

Liverpool, 23·0 in Swansea, 23·2 in Sunderland and 27·2 in Bolton. The 3835 deaths in these towns included 399 which were referred to the principal zymotic diseases, against 365 and 426 in the two preceding weeks; of these 32 resulted from diphtheria, 84 from measles, 75 from "fever" (principally enteric), 59 from whooping-cough, 56 from diarrhœa, 32 from scarlet fever, and 1 from small-pox. No death from any of these diseases were recorded last week in Plymouth or in Wolverhampton; in the other towns they caused the lowest death-rates in Croydon, Bradford, and Derby, and the highest rates in Portsmouth, Swansea, Nottingham, Bolton, and Preston. The greatest mortality from measles occurred in West Ham, Nottingham, Manchester, and Bolton; from whooping-cough in Bristol, Swansea and Preston; and from "fever" in Bolton and Sheffield. The mortality from scarlet fever showed no marked excess in any of the large towns. The 92 deaths from diphtheria included 43 in London, 9 in Leeds, 7 in West Ham, 5 in Swansea, 5 in Sheffield, 4 in Portsmouth, and 4 in Liverpool. One fatal case of small-pox was registered in Liverpool, but not one in any other of the thirty-three large towns; and no small-pox patients were under treatment in any of the Metropolitan Asylums Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of last week was 3090, against 3259, 3162, and 3142 on the three preceding Saturdays; 276 new cases were admitted during the week, against 319, 234, and 264 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 280 and 340 in the two preceding weeks, declined again last week to 295, and were 139 below the corrected average. The causes of 33, or 0·7 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Cardiff, Salford, Bradford, Leeds, and in fifteen other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, Sheffield, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19·7 and 21·0 per 1000 in the two preceding weeks, was again 21·0 during the week ending Dec. 10th, and was 3·2 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 13·6 in Leith, and 14·5 in Paisley, to 23·0 in Aberdeen and in Greenock, and 24·5 in Edinburgh. The 633 deaths in these towns included 18 which were referred to diarrhœa, 16 to whooping-cough, 12 to measles, 11 to "fever," 10 to scarlet fever, and 4 to diphtheria. In all, 71 deaths resulted from these principal zymotic diseases, against 73 and 83 in the two preceding weeks. These 71 deaths were equal to an annual rate of 2·4 per 1000, which was 0·5 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had increased from 9 to 21 in the three preceding weeks, declined again to 16 last week, of which 8 occurred in Glasgow and 3 in Edinburgh. The 12 deaths from measles showed a decline of 7 from the number in the preceding week, and included 5 in Glasgow and 3 in Edinburgh. The deaths referred to different forms of "fever," which had declined from 16 to 10 in the four preceding weeks, were 11 last week, of which 6 occurred in Glasgow, 2 in Edinburgh, and 2 in Paisley. The 10 fatal cases of scarlet fever showed a further increase upon recent weekly numbers, and included 3 in Glasgow, 3 in Greenock, and 2 in Edinburgh. Of the 4 deaths from diphtheria 2 were registered in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 128 and 147 in the two preceding weeks, further rose to 163 last week, and were 34 above the number in the corresponding period of last year. The causes of 30, or nearly 5 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had increased in the three preceding weeks from 27·7 to 31·6 per 1000, declined again to 25·4 during the week ending Dec. 10th. During the past four weeks the rate of mortality in the city has averaged 28·9 per 1000, the rate during the same period being 17·1 in London and 22·3 in Edinburgh. The 170 deaths registered in Dublin during the week under notice showed a decline of 42 from the number in the preceding week, and included 8 which were referred to the principal zymotic diseases, against 17 and 11 in the two preceding weeks; of these, 4 resulted from "fever," 3 from whooping-cough, and 1 from diarrhœa, but not one either from small-pox, measles, scarlet fever, or diphtheria. These 8 deaths were equal to an annual rate of 1·2 per 1000, the zymotic death-rate during the same period being 1·7 in London and 2·6 in Edinburgh. The deaths referred to different forms of "fever," which had been two in each of the two preceding weeks, rose to 4 last week. The fatal cases of whooping-cough, which had been 5 and 3 in the two preceding weeks, were again 3 last week. The 170 deaths in Dublin last week included 40 of infants under one year of age and 39 of persons aged upwards of sixty years; the deaths of infants showed a further increase, while those of elderly persons showed a further decline from recent weekly numbers. Seven inquest cases and 8 deaths from violence were registered; and 68, or more than a third, of the deaths occurred in public institutions. The causes of 16, or nearly 4 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING NOVEMBER, 1898.

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality during November in each of the forty-three sanitary areas of London. With regard to the notified cases of infectious diseases in the metropolis, it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to 10·8 per 1000 of the population, estimated at 4,504,768 persons in the middle of this year. In the three preceding months the rates had been 6·5, 8·9, and 11·5 per 1000 respectively. Among the various sanitary areas the rates were considerably below the average in Kensington, St. George Hanover-square, St. James Westminster, St. Martin-in-the-Fields, Strand, and St. Olave Southwark; while they showed the largest excess in Fulham, St. Luke, St. Saviour Southwark, Bermondsey, Woolwich, and Plumstead. Only one case of small-pox was notified in London during November (in Battersea sanitary area), and no small-pox patients were under treatment last month in any of the Metropolitan Asylum Hospitals. The prevalence of scarlet fever in London showed a decline from that recorded in the preceding month; among the various sanitary areas this disease showed the highest proportional prevalence in Hammersmith, Fulham, St. Pancras, Islington, Stoke Newington, St. Luke, Greenwich, and Plumstead. The Metropolitan Asylum Hospitals contained 3090 scarlet fever patients at the end of November, against 2207, 2425, and 2977 at the end of the three preceding months; the weekly admissions averaged 288, against 202, 270, and 350 in the three preceding months. The prevalence of diphtheria in London during November almost corresponded with that recorded in the preceding month; this disease was proportionally most prevalent in Holborn, St. Luke, St. Saviour Southwark, Newington, Bermondsey, Battersea, Lewisham, and Woolwich sanitary areas. There were 1269 diphtheria patients under treatment in the Metropolitan Asylum Hospitals at the end of November, against 865, 1024, and 1182 at the end of the three preceding months; the weekly admissions averaged 172, against 107, 163, and 172 in the three preceding months. The prevalence of enteric fever in London showed a further increase upon that recorded in recent months; among the various sanitary areas this disease showed the highest proportional prevalence in Marylebone, St. Pancras, St. Giles, City of London, Shoreditch, and St. George-in-the-East. The Metropolitan Asylum Hospitals contained 286 enteric fever patients at the end of November, against 118, 155, and 223 at the end of the three preceding months; the weekly admissions averaged 45, against 21, 28, and 41 in the three preceding months. Erysipelas was proportionally most prevalent in St. Giles, St. Luke, Bethnal Green, Whitechapel, St-George-in-the-East, and Mile End Old Town sanitary areas. The 40 cases of puerperal fever notified in London during November considerably exceeded the number recorded in any recent month, and included 4 in Camberwell, 3 in Hackney, 3 in Lambeth, and 3 in Greenwich sanitary areas.

The mortality statistics in the table relate to the deaths of

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING NOVEMBER, 1898.

(Specially compiled for THE LANCET.)

SANITARY AREAS.	Estimated population in the middle of 1898.	NOTIFIED CASES OF INFECTIOUS DISEASE.										DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.										Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON	4,504,766	1	1944	1392	4	647	5	40	636	—	4669	10·8	—	110	58	182	81	—	126	—	90	647	1·5	7049	16·3	133
West Districts.																										
Paddington	127,480	—	31	27	—	16	1	—	14	—	89	7·3	—	—	—	5	3	—	6	—	2	16	1·3	185	15·1	144
Kensington	172,174	—	39	16	2	26	1	—	19	—	103	6·2	—	1	2	1	3	—	3	—	2	12	0·7	215	13·0	114
Hammersmith	107,370	—	63	20	—	17	—	—	11	—	111	10·8	—	1	6	4	2	—	4	—	1	18	1·7	162	15·7	147
Fulham	125,275	—	116	44	—	19	—	2	15	—	196	16·3	—	—	7	3	—	—	7	—	5	24	2·0	180	15·0	138
Chelsea	96,713	—	34	24	—	14	—	—	10	—	82	8·8	—	3	3	2	—	—	2	—	3	13	1·4	142	15·3	158
St. George Hanover-square	80,608	—	13	13	—	6	—	—	2	—	34	4·4	—	—	—	1	—	—	—	—	2	3	0·4	101	13·1	106
Westminster	52,574	—	5	15	—	9	—	1	11	—	41	8·1	—	—	1	—	—	—	1	—	1	3	0·6	93	18·5	118
St. James Westminster	22,200	—	2	4	—	2	—	—	4	—	12	5·6	—	—	—	1	—	—	—	—	1	1	0·5	43	20·2	266
North Districts.																										
Marylebone	140,483	—	28	22	—	27	—	2	17	—	96	7·1	—	—	—	4	1	—	5	—	5	15	1·1	222	16·5	107
Hampstead	78,755	—	18	12	—	15	—	—	3	—	48	6·4	—	—	—	—	—	—	1	—	2	3	0·4	69	9·1	89
St. Pancras	243,416	—	173	79	—	48	—	2	45	—	347	14·9	—	7	5	19	—	—	10	—	8	49	2·1	403	17·3	146
Islington	344,616	—	196	25	1	44	1	2	28	—	297	9·0	—	8	2	2	13	—	6	—	2	33	1·0	482	14·6	134
Stoke Newington	34,660	—	22	12	—	6	—	1	6	—	47	14·1	—	—	—	1	—	—	—	—	1	2	0·6	40	12·0	66
Hackney	219,630	—	97	76	—	37	1	3	33	—	247	11·7	—	3	1	7	2	—	11	—	2	26	1·2	305	14·5	125
Central Districts.																										
St. Giles	37,519	—	16	3	—	7	—	—	9	—	35	9·7	—	—	—	1	—	—	2	—	—	3	0·8	61	17·0	69
St. Martin-in-the-Fields	12,424	—	1	1	—	1	—	—	—	—	3	2·5	—	—	—	—	—	—	—	—	1	1	0·8	26	21·8	333
Strand	23,284	—	8	3	—	2	—	—	—	—	13	5·8	—	—	—	—	—	—	1	—	—	1	0·4	42	18·8	167
Holborn	30,056	—	15	21	—	1	—	1	5	—	43	14·9	—	—	—	2	3	—	—	—	2	7	2·4	58	20·1	184
Clerkenwell	66,120	—	31	18	—	7	—	2	8	—	66	10·4	—	12	1	—	—	—	2	—	2	17	2·7	140	22·1	173
St. Luke	41,076	—	29	27	—	7	—	1	13	—	77	19·6	—	7	6	5	—	—	1	—	—	19	4·8	107	27·2	116
City of London	29,088	—	7	10	—	6	—	—	2	—	25	9·0	—	—	—	5	—	—	3	—	—	8	2·9	68	24·4	161
East Districts.																										
Shoreditch	121,485	—	41	42	—	24	—	2	17	—	126	10·8	—	15	1	6	—	—	3	—	4	29	2·5	216	18·5	138
Bethnal Green	129,027	—	52	44	—	18	—	1	39	—	154	12·5	—	17	2	10	—	—	5	—	7	41	3·3	261	21·1	165
Whitechapel	80,559	—	29	19	—	5	—	1	28	—	82	10·6	—	9	1	—	1	—	1	—	2	14	1·8	160	20·7	149
St. George-in-the-East	48,241	—	14	8	—	12	—	—	11	—	45	9·7	—	3	—	2	4	—	2	—	—	11	2·4	89	19·2	151
Limehouse	58,661	—	15	15	—	11	—	—	11	—	52	9·2	—	4	1	1	2	—	4	—	2	14	2·5	109	19·4	99
Mile End Old Town	112,528	—	36	25	—	16	—	2	24	—	103	9·5	—	5	1	9	—	—	2	—	4	21	1·9	218	20·2	105
Poplar	170,220	—	50	37	—	29	—	—	32	—	148	9·1	—	3	2	3	—	—	8	—	5	21	1·3	298	18·3	151
South Districts.																										
St. Saviour Southwark	24,562	—	7	28	—	3	—	—	4	—	42	17·8	—	3	—	3	—	—	2	—	—	8	3·4	43	18·3	200
St. George Southwark	60,466	—	27	26	1	8	—	—	9	—	71	12·2	—	—	1	2	2	—	—	—	—	5	0·9	84	14·4	186
Newington	123,183	—	59	72	—	18	—	2	19	—	170	14·4	—	4	—	9	10	—	2	—	3	28	2·4	242	20·5	133
St. Olave Southwark	11,288	—	2	—	—	2	—	—	—	—	4	3·7	—	—	—	—	1	—	—	—	—	1	0·9	21	19·4	179
Bermondsey	85,738	—	44	61	—	13	—	—	14	—	132	16·1	—	1	1	10	4	—	2	—	2	20	2·4	173	21·0	173
Rotherhithe	40,849	—	9	4	—	4	—	1	8	—	26	6·6	—	—	—	1	1	—	1	—	—	3	0·8	71	18·1	202
Lambeth	304,073	—	114	119	—	41	—	3	42	—	319	10·9	—	—	4	19	5	—	6	—	6	40	1·4	443	15·2	112
Battersea	171,921	1	58	103	—	19	—	1	25	—	207	12·6	—	—	1	12	2	—	3	—	1	19	1·2	232	14·1	119
Wandsworth	202,526	—	84	71	—	23	1	2	25	—	206	10·6	—	1	1	7	11	—	2	—	2	24	1·2	223	11·5	95
Camberwell	261,189	—	133	75	—	25	—	4	30	—	267	10·7	—	—	3	10	4	—	7	—	2	29	1·2	372	14·9	136
Greenwich	180,441	—	117	65	—	26	—	3	24	—	235	13·6	—	1	3	4	2	—	4	—	2	16	0·9	308	17·8	148
Lewisham (excluding Penge)	88,562	—	10	42	—	11	—	1	6	—	70	8·2	—	1	—	2	—	—	2	—	—	5	0·6	104	12·2	89
Woolwich	41,478	—	15	35	—	8	—	—	3	—	61	15·3	—	1	1	7	2	—	4	—	1	15	3·8	71	17·8	90
Lee	39,717	—	17	17	—	5	—	—	4	—	43	11·3	—	—	1	2	—	—	—	—	—	3	0·8	44	11·6	76
Plumstead	62,531	—	67	10	—	7	—	—	6	—	90	15·0	—	—	—	—	1	—	1	—	1	3	0·5	68	11·3	139
Port of London	—	—	—	2	—	2	—	—	—	—	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including 38 cases of membranous croup.

† Including deaths from membranous croup.

persons actually belonging to the various sanitary areas of the metropolis, the deaths occurring in the institutions of London having been distributed among the various sanitary areas in which the patients had previously resided. During the four weeks ending Saturday, Dec. 3rd, the deaths of 7049 persons belonging to London were registered, equal to an annual rate of 16·3 per 1000, against 20·7, 21·0, and 17·3 in the three preceding months. The lowest death-rates in the various sanitary areas were 9·1 in Hampstead, 11·3 in Plumstead, 11·5 in Wandsworth, 11·6 in Lee, 12·0 in Stoke Newington, and 12·2 in Lewisham; the highest rates were 21·0 in Bermondsey, 21·1 in Bethnal Green, 21·8 in St. Martin-in-the-Fields, 22·1 in Clerkenwell, 24·0 in St. George Southwark, 24·4 in London City, and 27·2 in St. Luke. During the five weeks of November 647 deaths were referred to the principal zymotic diseases in London; of these, 110 resulted from measles, 58 from scarlet fever, 182 from diphtheria, 81 from whooping-cough, 126 from enteric fever, and 90 from diarrhœa. These 647 deaths were equal to an annual rate of 1·5 per 1000; among the various sanitary areas the lowest zymotic death-rates were recorded in St. George Hanover-square, Westminster, St. James Westminster, Hampstead, Stoke Newington, Strand, Lewisham, and Plumstead; and the highest rates in Clerkenwell, St. Luke, City of London, Bethnal Green, St. Saviour Southwark, and Woolwich. The 110 fatal cases of measles were as many as 182 below the corrected average number in the corresponding periods of the ten preceding years; this disease showed the highest proportional fatality in Clerkenwell, St. Luke, Shoreditch, Bethnal Green, Whitechapel, and St. Saviour Southwark sanitary areas. The 58 deaths referred to scarlet fever were only half the corrected average number; among the various sanitary areas this disease was proportionally most fatal in Hammersmith, Fulham, and St. Luke. The 182 fatal cases of diphtheria were 73 below the corrected average number; this disease showed the highest proportional fatality in St. Pancras, St. Luke, City of London, Bethnal-green, Mile End Old Town, St. Saviour Southwark, Bermondsey, and Woolwich sanitary areas. The 81 deaths from whooping-cough were 56 below the corrected average number; among the various sanitary areas this disease was proportionally most fatal in Holborn, St. George-in-the East, Newington, and Wandsworth. The 126 deaths referred to enteric fever were 41 above the corrected average number; this disease showed the highest proportional fatality in Fulham, City of London, Limehouse, St. Saviour Southwark, and Woolwich sanitary areas. The 90 fatal cases of diarrhœa were slightly below the corrected average number. In conclusion, it may be stated that the aggregate mortality in London last month from these principal zymotic diseases was more than 33 per cent. below the average.

Infant mortality in London during November, measured by the proportion of deaths of children under one year of age to registered births, was equal to 133 per 1000. Among the various sanitary areas the lowest rates of infant mortality were recorded in Hampstead, Stoke Newington, St. Giles, Lewisham, Woolwich, and Lee; and the highest rates in St. James Westminster, St. Martin-in-the-Fields, Holborn, St. Saviour Southwark, St. Olave Southwark, St. George Southwark, and Rotherhithe.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

STAFF-SURGEONS Edward G. Swan and John Otley have been placed on the Retired List.

The following appointments are announced:—Fleet-Surgeon Standish T. O'Grady to Yarmouth Hospital. Staff-Surgeon Herbert P. Shuttleworth to the *Cambridge* temporary. Surgeons: William H. Pope to the *Thunderer* and William J. Colborne to the *Victory* for disposal.

ARMY MEDICAL STAFF.

Colonel William S. M. Price, R.A.M.C., to be Surgeon-General, vice A. A. Gore, retired.

ROYAL ARMY MEDICAL CORPS.

Colonel Frederick B. Scott, C.M.G., is placed on retired pay. The under-mentioned Lieutenant-Colonels to be Colonels:—Alexander W. Duke, vice W. S. M. Price and James M. Beamish, vice F. B. Scott, C.M.G.

INDIA AND THE INDIAN MEDICAL SERVICES.

The Queen has approved of the retirement from the Service of the under-mentioned officers:—Major-General Alfred Anderson, Madras Infantry; Lieutenant-Colonel Walter Conroy, Bengal Establishment; and Lieutenant-Colonel Malachi O'Dwyer, Bengal Establishment.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Lieutenant E. P. A. Mariette resigns his commission.

VOLUNTEER CORPS.

Rifle: 2nd Volunteer Battalion the Northumberland Fusiliers: David Kidd Muir to be Surgeon-Lieutenant. 1st Middlesex (Victoria and St. George's): Surgeon-Captain F. E. Fenton to be Surgeon-Major. 2nd Volunteer Battalion Highland Light Infantry: Surgeon-Lieutenant W. F. Macdonald resigns his commission.

MENTIONED IN DISPATCHES.

In a dispatch from Major-General Lord Kitchener of Khartoum, G.C.B., K.C.M.G., Sirdar of the Egyptian Army, the names of the following medical officers who have distinguished themselves during the recent operations in the Soudan are mentioned:—Lieutenant-Colonel J. A. Clery, R.A.M.C.; Lieutenant-Colonel N. Leader, late R.A.M.C.; Major G. D. Hunter, D.S.O., R.A.M.C.; and Captain C. C. Flemming, R.A.M.C.

SURGEON MAILLARD, V.C.

Surgeon W. J. Maillard, of the *Hazard*, who, as we announced last week, has received the Victoria Cross, is the only naval medical officer in possession of the much-coveted distinction. The other officers of the Royal Navy and Royal Marines upon whom this decoration has been conferred and whose names appear in Lean's Royal Navy List are as follows:—Rear-Admiral Charles Davis Lucas, June 21st, 1854; Rear-Admiral John Bythesea, C.B., C.I.E., August 9th, 1854; Rear-Admiral Henry James Raby, C.B., June 18th, 1855; Lieutenant-Colonel George Dare Dowell, R.M.A., July 13th, 1855; Admiral of the Fleet Sir John Edmund Commerell, G.C.B., F.R.G.S., October 11th, 1855; Admiral Sir Nowell Salmon, G.C.B., A.D.C., November 16th, 1857; Israel Harding (Chief Gunner), July 11th, 1862; and Rear-Admiral Arthur Knyvet Wilson, C.B., February 29th, 1884.

RECRUITS FOR THE ARMY.

What with the growth of the empire, the rumours of war from time to time, and the unsettled state of political affairs generally the demands for the maintenance of a strong navy and army are increasing instead of diminishing. As regards the navy, it annually takes in a large number of boys who grow up on shipboard and develop into thoroughly trained and able-bodied sailors, but the army has never yet tapped the various sources of supply in the country. Several years ago we pointed out that the army might advantageously have recourse to some method for an increased enlistment of boys and the establishment of training camps for them. We are consequently glad to notice an article in our contemporary the *Army and Navy Gazette* of Dec. 10th, dealing with the subject of extending the machinery of existing State schools so that boys might be passed into the ranks of the army. We believe that a time will come when the State will recognise that it has claims in this respect in regard to youths to whom it has stood *in loco parentis* and that some system will be adopted by which the State may render their services more readily available for State purposes than at present. The subject is altogether too large to be circumscribed within the limits of a paragraph, but we think that a scheme might be devised and formulated which would prove of mutual benefit to the youths themselves as well as to the army. From a sanitary and hygienic standpoint and for improving the physique, conduct, and discipline of the boys, good would result we have little doubt.

SURGEON-GENERAL GORE.

This officer must have had long and arduous work as Principal Medical Officer of Her Majesty's Forces in India during the late tribal wars on the North-west frontier. The medical administration and arrangements for a large army in the field under such circumstances was a very responsible undertaking and our readers have been already made acquainted with the scale upon which these had to be provided. So far as we can learn they successfully withstood the severe test to which they were put during the

time General Sir W. Lockhart's forces were in the field and we therefore hope that Surgeon-General Gore's services in this respect will be recognised.

SURGEON-GENERAL W. TAYLOR, C.B.

We are glad to notice the name of Surgeon-General Taylor, C.B., of the Army Medical Service, in the list of those who have recently dined with the Queen and the Royal Family. The officer in question is a representative of a large and important branch of the army which has always done good service in the field and is still doing excellent work wherever there are British troops in various parts of the empire. It is scarcely necessary to add therefore that recognitions on Her Majesty's part of the services rendered by members of this branch of the service are very welcome and will have a good effect upon the Royal Army Medical Corps.

THE MEDICAL RESERVE OF THE FRENCH ARMY.

During the past few months upwards of 700 medical officers belonging either to the Reserve or to the Territorial Army have been put through a course of practical instruction at various centres under the supervision of experienced officers of the active army. As far as possible the convenience of individuals was consulted, the reservists being attached to corps or hospitals in the vicinity of their own residences, and during the time that they were employed they received the pay of their several grades together with certain travelling and other allowances.

PORTABLE HOSPITALS FOR THE UNITED STATES ARMY.

Sixty portable hospitals are being constructed in America for the use of the army—most of them for the troops at Porto Rico and Cuba. Each hospital—to be constructed in sections—will accommodate 40 patients; they will be raised on posts 18 in. from the ground and be made of pine and furnished with painted canvas roofs. Those intended for use in the north will have double floors and felt lining.

Major M. A. T. Collie, M.B. Aberd., of the Indian Medical Service, has been appointed to act as superintendent of Matheran. Major R. J. Baker, M.D. Dub., I.M.S., acts as superintendent to the lunatic asylum at Colaba. Major A. V. Anderson, M.B. Aberd., I.M.S., has been appointed on special plague duty in the Dharwar district.

Surgeon-General Townsend of the Umballa district has, it is believed, taken over the duties of Principal Medical Officer of Her Majesty's Forces in India from Surgeon-General Gore, pending the arrival of Surgeon-General W. Taylor, C.B.

The Queen has appointed Staff-Surgeon James Lawrence Smith, R.N., to be a Member of the Fourth Class of the Royal Victorian Order.

The following officer has qualified as interpreter in the French language:—Major J. H. Branningan, R.A.M.C.

Correspondence.

"Audi alteram partem."

THE PROPOSED SCHOOL OF TROPICAL MEDICINE.

To the Editors of THE LANCET.

SIRS,—In your issue of last week you referred to the memorandum issued by the Seamen's Hospital Society in support of the scheme proposed for the New School of Tropical Medicine as a question of general policy. I wish to examine it from another standpoint. I would incidentally remark that the memorandum and the appeal for subscriptions have not been sent to either Dr. Anderson, Mr. G. R. Turner or myself.

I am writing as the senior visiting physician of the *Dreadnought* Seamen's Hospital, whose experience of its medical work goes back more than twenty years, to the time when Sir Henry Burdett was the secretary, and is probably more complete than that of anyone living except Mr. Johnson Smith, the principal medical officer. I have continued my associations with the hospital for this long period partly from a desire to see tropical cases, partly from the old traditions of the *Dreadnought*, and partly from the opportunities it afforded me to show students and medical men specimens of tropical disease. The scheme of the committee of management of the Seamen's Hospital Society will, if carried out, effectually destroy all these.

I think that the scheme promulgated by the Committee of Management is unnecessary, most unwise, and extravagant. £13,000 in July has expanded into £16,000 in December. I shall also show that the arguments urged in its support are misleading. The scheme in the appeal of the society merely mentions a bacteriological laboratory, pathological laboratory, lectures, &c.; but the details are clearly stated in Sir Henry Burdett's letter to the *Times* of July 11th.

> Provision will be made for from twenty to twenty-five students with sleeping accommodation for about ten. There will be a fully equipped laboratory, pathological room, museum, and every other accessory calculated to make the school efficient.

Before the bacteriology of tropical medicine can be studied a general knowledge of bacteriological methods and of ordinary bacteriological diseases must first be learnt, and this can easily be obtained in the many bacteriological laboratories which now exist in London and elsewhere. The bacteriology of tropical diseases is fully taught at King's College and at Netley, and also, I suppose, at the British Institute of Preventive Medicine, and has long been so taught. A new, fully-equipped bacteriological laboratory is obviously unnecessary, and the sum for furniture, fittings, &c., for a new school of from 20 to 25 students—viz., £400—if this is to include a bacteriological laboratory and its equipments, is almost too ridiculously inadequate to be referred to.

I have carefully looked over the list of the names of the gentlemen forming the Advisory Committee, and I can only find two (excluding the chairman and deputy chairman) who can be in the slightest degree conversant with the medical work of the *Dreadnought* Seamen's Hospital. Dr. Robert Barnes was its physician in its best old days and Mr. Johnston Smith is the principal medical officer (resident). It will be news to all the others that there exists at present in the Seamen's Hospital an excellent little museum, rich in pathological material, started in the days of Busk and George Budd, and which only needs a curator for its further development. I may venture to say that with the exceptions above named no one on that Advisory Committee has ever crossed the threshold of that museum.

For the teaching of tropical medicine in London the essentials which are needed are a working laboratory for the examination of blood, sputa, excreta, &c., and an electrical room such as are in existence at every properly equipped general hospital and such as are evidently contemplated at Liverpool. These should be established at both the parent hospital and the Branch Hospital and would probably come much nearer to the modest expenditure (£350) annually required at Liverpool than to that asked for in the proposed scheme. The calculation that £1000 will be contributed annually in fees by students sent by Government is too absurd for serious attention unless the boarding and lodging of the ten students are included. But that these rooms will be constantly filled seems doubtful if the new school is so easy of access as is urged by the committee.

From these remarks on the general scheme I now pass on to a consideration of the reasons put forward in the memorandum sent out by the Seamen's Hospital Society.

1. The small number and but little variety of the cases of tropical disease treated in the society's hospitals have been clearly pointed out. We are told that the "building called the 'Dreadnought' at Greenwich which formerly was the infirmary of Greenwich Hospital is not the property of the Seamen's Hospital Society but is held by them from the Lords Commissioners of the Admiralty subject to six months' notice." This of course would obviously be a fatal objection to such a scheme as that indicated in Sir H. Burdett's letter, but considering that the society has been in possession for twenty-eight years the establishment and proper fitting up of a working laboratory and electrical room would not seriously embarrass the society's architect. Indeed, I find on page 16 of its latest report, published only this year, that since the society has occupied the premises it has much improved the building at Greenwich, a chapel has been added, and the entire drainage of the hospital has been renewed. The building of the chapel necessitated a very extensive alteration of the Somerset ward of the hospital. I think, therefore, that even on the insecure tenure put forward by the committee the necessary alterations for its proper conduct as a hospital might be carried out without incurring the displeasure of the Lords Commissioners of the Admiralty. I venture, however,

to ask, Is the whole truth disclosed in the statement that it is held from the Lords Commissioners of the Admiralty at six months' notice? for I find the following statement in "An Account of the Origin and Progress of the Seamen's Hospital Society," published at p. 12 in the same report: "After four years' endeavours on the part of the committee to effect so desirable an object the Lords Commissioners of the Admiralty in the year 1870, under the powers afforded them by the 'Greenwich Hospital Act' of the previous session, granted the society a lease for 99 years of the infirmary (and adjoining Somerset ward) at Greenwich Hospital at a nominal rental in view of the loan of the ship, with the attendant expense of the external repairs, fittings, and ship's stores." I leave it to the Committee of Management to reconcile the two statements.

2 and 3. These can be taken together. The relations of the Branch Hospital to the parent institution at Greenwich are sufficiently clear from a paragraph in page 11 of the committee's report for the year 1889.

> It is intended that the branch shall be in telephonic communication with the hospital at Greenwich and that the beds shall be used for the retention of urgent or special cases, all others being transferred by ambulance to Greenwich.

There is a special ambulance and a room for it at the Branch Hospital which was opened in 1890.

The manner in which this intention has been carried out since the present honorary physician was appointed in 1892 is clearly shown by the following figures. In 1892 the number of cases of malaria and dysentery—typical tropical diseases—treated at the Greenwich Hospital were respectively 65 and 36. In the past year, 1897, they have fallen to 32 and 25. If this is not a depletion and starving of the parent institution I should like to know what is. It is, moreover, admitted in the memorandum that 31 cases of malaria were treated at the Branch Hospital during the year ending Nov. 30th last. Does anyone conversant with malaria believe that the bulk of these cases could not have been taken safely and without harm across the river to the parent institution in accordance with the expressed intention of the founders who publicly appealed for subscriptions on the lines quoted above? If this policy had been honestly adhered to by the visiting physician and the present Committee of Management no such enlargement of the hospital as is now proposed would have been necessary. The ambulance does not now carry across any tropical cases except it be someone who is expected to undergo a protracted convalescence. This starving of the parent hospital of tropical diseases is rapidly bearing fruit on its medical side, for this is being more and more turned into an asylum or infirmary for chronically-diseased and incurable sailors. A census of my wards at the end of last month showed that in my 33 beds there were patients who had been there for 671, 444, 408, 266, 212, 193, 163, and 139 days, and for whom no benefit can be expected.

I would submit that it is very unfortunate that Mr. Chamberlain's most excellent wishes should not have been placed before a representative body like the Royal College of Physicians of London who would probably have nominated a committee to report on the subject. Such a committee would have carefully considered the question in its whole bearing and a comprehensive scheme would have been laid before the Right Honourable the Secretary of State for the Colonies. It must necessarily have included the work of the existing bacteriological laboratories, of the parent hospital at Greenwich as well as of its branch, and of any other medical institutions with sufficient tropical cases of disease, such as Liverpool, Leith, &c., to afford facilities for such clinical teaching. All tropical cases do not come into the Albert Docks, and other institutions should be recognised partially or entirely as teaching centres for colonial surgeons as well as the proposed new school. It would seem that Mr. Chamberlain has only had the opportunity during the inception of the scheme of obtaining the somewhat one-sided views of the medical adviser to the Colonial Office and of the Committee of Management of the Seamen's Hospital Society. The result is that he is recommended to enlarge and extend the work of the Branch Hospital, to which the colonial medical adviser is the sole physician, to build a new school there, and to make a two months' course at that school compulsory on every aspirant to the Colonial Medical Service. The injurious effects of the carrying out of the scheme on the parent hospital and other institutions have apparently but little troubled its framers.

I presume that my remembrances of these past years and my knowledge of these unpalatable facts were considered sufficient reasons why I and my colleagues were deliberately excluded from the conferences of the committee.

Another instance of disingenuousness is shown in the appeal for funds and should be mentioned. In the face of our published correspondence they actually circulate this paragraph:—

> The educational body of the school will include not only members of the staff of the Seamen's Hospital Society, on which are to be found men who have themselves practised in the tropics, but.....

Two members only of the medical staff—Dr. Manson and Dr. John Anderson—have practised in the tropics. Dr. Manson may be the educational staff. I have yet to learn that Dr. Anderson has signified his willingness to join. Can any statement be more misleading? Apologising for the length of this letter which, I hope, clearly explains the situation,—I am, Sirs, yours faithfully,

JOHN CURNOW, M.D., F.R.C.P. Lond.,
Senior Visiting Physician to the Seamen's *Dreadnought* Hospital.
Wimpole-street, W., Dec. 12th, 1898.

We have received from the Secretary of the Seamen's Hospital Society a copy of a letter addressed by him to Sir William Broadbent which we print below.

Dreadnought Seamen's Hospital, Greenwich, S.E.,
Dec. 14th, 1898.

DEAR SIR WILLIAM BROADBENT,—I have to acknowledge the receipt of your letter of Dec. 7th. I understood it to have been written as an official communication and therefore brought it before the Committee of the Seamen's Hospital Society at their meeting on Dec. 9th.

You state that the action of the Committee "prevented certain aspects of the question from being brought to the notice of the Secretary of State and made the data on which he based his judgment imperfect and one-sided" and that thus "his approval was obtained under false pretences." This statement the Committee maintain has no foundation. There has certainly been no false pretence and the use of such a term is indefensible. The Committee believe that all aspects of the question have been put before the Secretary of State and fully considered by him. If in your view this is not so the Committee cannot doubt that Mr. Chamberlain is still open to consider the matter from any fresh aspect in which it can be put before him. You further state broadly that the Committee have made a suggestion falsely in saying that the visiting staff have been invited to coöperate. The Committee much regret that you should have permitted yourself to make such a statement and they protest not only against the language but against so strained an interpretation of the memorandum. The correspondence which the *Dreadnought* visiting staff have published shows clearly at what stage they were asked to coöperate and nothing has been written in the memorandum to lead to the conclusion that they were invited to coöperate at an earlier date than is disclosed by the correspondence. Whether the invitation when sent was an insult or not is a question on which the public will form their own opinion. It was not so intended by the Committee and they do not gather that the visiting staff have so viewed it.

The Committee observe that you object to the omission from Sir Henry Burdett's letter, as issued with the memorandum, of the passage against which the *Dreadnought* visiting staff so strenuously protested. The letter was reprinted in such a form as to show that a passage had been omitted. The Committee recognised that after the protest of the visiting staff the paragraph objected to must not be republished, but they saw no occasion to abstain from publishing the rest of the letter. We can hardly suppose that the visiting staff will join in your protest against the omission of the paragraph in question.

The Committee cannot but feel astonishment at a charge of such dishonourable acts as "suppression of truth material to the issue and suggestion of what is calculated to mislead" being made against them by a leading physician. Such charges as these are most regrettable and unfounded and, the Committee fear, will not tend to the amicable adjustment of the difficulty which has arisen and which the Committee greatly regret and are anxious to do everything in their power to remove.

Believe me to be, yours faithfully,
P. MICHELLI, Secretary.

Sir Wm. Broadbent, Bart., M.D., F.R.C.P., F.R.S., &c.,
84, Brook-street, Grosvenor-square, W.

WHAT IS TABES MESENTERICA IN INFANTS?

To the Editors of THE LANCET.

SIRS,—The subject of tuberculosis, especially its prevention, is just now being brought prominently before the profession and the public; it is therefore of the utmost importance that the figures on which are based the arguments for preventive measures should be as accurate as possible. As you observe in your leading article of Dec. 3rd Sir Richard Thorne in the recent Harben Lectures has brought forward some remarkable statistics to prove that whilst pulmonary phthisis is steadily decreasing, tabes mesenterica in children under one year—*not, be it noted, in older children*—is decidedly increasing, and from these figures he draws some important deductions.

It seems, however, desirable first to inquire what the term "tabes mesenterica" really means when applied to children under one year. Broadly, and yet strictly, it may be taken, I imagine, to signify one or more of the following conditions: tuberculous peritonitis, tuberculous enteritis, and caseation of the mesenteric glands. How frequently do these conditions occur in children under one year and to what extent are they diagnosable? 1. Tuberculous peritonitis, I take it all authorities are agreed, is rare in children under two years—almost unknown in those under one year. I have only met with one example—viz., in a child aged one year and nine months—in a series of 300 consecutive post-mortem examinations upon children under two years which I have myself performed at the Victoria Hospital, Chelsea, and in the post-mortem records of the hospital for the last ten years I can only find one other case and that was in a patient of exactly the same age. 2. Tuberculous ulceration of the bowel and caseation of the mesenteric glands may best be considered together, for when either one is at all advanced the other is rarely absent. That they occur with considerable frequency in young children is undoubted. In the series of 300 necropsies just referred to tuberculous mischief was present in the intestines or mesenteric glands, usually in both, in 36 cases (18 under one year and 18 between one and two years).

At first this comparatively large number seems to coincide with the recorded frequency of tabes mesenterica in the national death statistics, but on further examining the clinical and pathological records of these cases it was found that in nearly all the abdominal lesion was merely a part, usually quite a subsidiary part, of a more general tuberculosis. 12 were ordinary examples of tuberculous meningitis and certainly could never be regarded as cases of tabes mesenterica; in most of the others pulmonary mischief was predominant during life and was found post mortem to be far more extensive and advanced than the abdominal lesions: in fact, in only 3 of the cases (1 being the case of tuberculous peritonitis already mentioned and the other 2 being by no means typical) was there any probability of tabes mesenterica being diagnosed with reasonable confidence during life. Moreover, on what is a diagnosis of caseation of the mesenteric glands to be based? If they can be felt well and good, but probably everyone will admit that they are rarely palpable, whilst if the diagnosis be made from such symptoms as wasting, fever, &c., the possibilities of error are enormous. But it may be said that at any rate tuberculous enteritis gives rise to more definite and characteristic symptoms. What symptoms?—pain, diarrhœa, wasting, a big abdomen, fever. Are there not plenty of other causes for these in infants? What justification have we, without confirmatory evidence elsewhere, for assuming them to have a tuberculous origin, especially if the records of pathological experience give no support to such a view? In children over two years of age the matter is of course different.

I fully agree therefore with the statement in Ashby and Wright's "Diseases of Children" that "mesenteric disease is much more frequently diagnosed than discovered post mortem"; but, if so, what is the real nature of the thousands of fatal cases of so-called tabes mesenterica in young children? Simply, I believe, marasmus the result of chronic gastro-intestinal catarrh. An infant is brought up by hand; its food disagrees, it gets gastro-intestinal catarrh which leads to distension of the abdomen, griping pains, chronic and very intractable diarrhœa, and occasional vomiting. Of course the child wastes steadily; it has perhaps irregular pyrexia (though I suspect that the temperature is not as a rule very systematically taken in these cases). The mother suggests that the child has "consumptive bowels," the medical practitioner agrees; it is the simplest way out of the difficulty and saves the necessity of taking much further trouble in treatment, and after death he writes "tabes mesenterica" on the certificate; it is an attractively impressive term and no doubt conveys much consolation to the afflicted parents. These cases are to be seen, of course, by the hundred at any children's hospital, but they are not tuberculous—the necropsy proves that. I have notes of nearly 100 post-mortem examinations on such cases, all children under two years of age In only one was any abdominal tuberculous lesion present and that was merely early caseation in the mesenteric glands and one nodule in the intestine, yet in very many "tabes mesenterica" might have been diagnosed with much confidence but for the wholesome corrective of pathological experience. We need to know definitely how we stand in this matter and I hope to elicit expressions of opinion from other hospitals for children. If tabes mesenterica be common in infants by all means let us deal with it, but if, as I firmly believe, it is comparatively rare, let us try to diffuse a knowledge of the fact throughout the profession and so put an end to much erroneous certification.

Do not let me be misunderstood. I fully believe that milk may and frequently does convey tuberculosis and that if the supply were pure the mortality from genuine tuberculous diseases would be materially diminished, though I maintain that so-called tabes mesenterica in infants would be almost unaffected, except in so far as any improvement in the milk-supply would diminish the dangers of gastro-intestinal catarrh. But if we persuaded the public to adopt the precautions with regard to cows and to milk which we recommend and afterwards found that the chief disease we had attributed to infective milk was as rampant as ever, assuredly a very harmful reaction would follow; the public would look to us for an explanation, and what satisfactory one could we give compatible with our professional self-respect?

Another point arises in Sir R. Thorne's lectures. He states that tuberculous meningitis has increased and that this disease, like tabes mesenterica, is essentially due to the reception of the tuberculous infection into the alimentary tract. This statement raises two questions. First, has tuberculous meningitis really increased, or is the increase more apparent than real and due to increased correctness in diagnosis? for many cases now properly described as tuberculous meningitis would no doubt in former years have been included under "hydrocephalus," "convulsions," &c. Secondly, is it, as a matter of fact, usually due to infection through the alimentary canal? It is, of course, as a rule merely part of a general miliary tuberculosis, and to produce this an infective centre must exist somewhere, if in the abdomen in caseous mesenteric glands or possibly in old tuberculous ulcers of the bowel. This raises questions too wide to be brought within the limits of a letter, and it is the less necessary inasmuch as I have discussed them in a paper read before the Medical Society of London and published in THE LANCET of May 12th, 1894. In that paper I tried to prove on post-mortem evidence that tuberculous disease in children started much more frequently in the thoracic than in the mesenteric glands, and that presumably therefore (though this does not necessarily follow) the infection is derived more frequently from the respiratory than from the alimentary tract. Statistics published by Dr. Colman from the records of the Hospital for Sick Children, Great Ormond-street,[1] coincide closely with mine. I know that Dr. Sims Woodhead, from post-mortem results in Edinburgh, attaches much greater relative importance to the mesenteric glands and it seems very desirable that the whole subject should be further investigated.

So far, however, as Sir R. Thorne's statement about tuberculous meningitis is concerned, I have gone through my notes of 44 necropsies on cases of that disease in children specially examined with a view to determining the primary focus of infection, and in 31 the infective centre was almost certainly in the chest, usually in the bronchial or tracheal glands; in only 2 was it certainly in the abdomen; in 6 it might have been either in the chest or in the abdomen; and in 5 it was in other parts of the body or was not found. In 14 of the cases there was not even any sign of tuberculous mischief in either the mesenteric glands or intestine, whilst in nearly every case there were caseous and softening glands in

[1] Brit. Med Jour., vol. ii. 1893.

the thorax. Certainly, so far as they go, these figures do not support the idea that tuberculous meningitis is mainly due to the reception of tuberculous infection into the alimentary tract—unless, indeed, as is possible, the bacilli obtained access through the alimentary canal but without necessarily giving rise to any local lesion either there or in the mesenteric glands.

I am, Sirs, yours faithfully,

Cavendish-place, W., Dec. 6th, 1898. J. WALTER CARR.

THE ANTI-TUBERCLE CRUSADE.

To the Editors of THE LANCET.

SIRS,—In a book written by Gideon Harvey, M.D., about 1660, consumption is described as an endemic and epidemic disease and the following passage gives some idea of the then prevalent belief in its infective nature: "And considering with all its malignity and contagious nature, it may be numbered among the worst Epidemicks or popular diseases, since next to the Plague, Pox, and Leprosie, it yields to none in point of contagion; for it's no rare observation here in England, to see a fresh coloured lusty young man yoake to a consumptive female, and him soon after attending her to the grave. Moreover nothing we find taints sound lungs sooner, than inspiring or drawing in the breath of putrid ulcered consumptive lungs; many having fallen into consumptions, only by smelling the breath or spittle of Consumptives, others by drinking after them; and what is more, by wearing the Cloaths of Consumptives, though two years after they were left off."

With the exception of the last sentence this opinion so nearly accords with the views of to-day that it is difficult to understand why it remained in abeyance for so many years. Of course it was not founded upon a scientific basis and, I suppose, as we became more exact we were unable to accept the clinical facts unless supported by experimental proof. Thanks to the discovery of Koch we are now emerging from the path of error into which we had temporarily strayed and in doing so I think we must admit that we should have been wiser, or at any rate conferred more benefit on mankind, if we had accepted the teachings of our predecessors who, if they had not the advantage of so much scientific knowledge to assist them, evidently possessed considerable clinical acumen and were able to make accurate deductions therefrom. There are, of course, errors in Gideon Harvey's book, but who can say that some of the statements are not in advance of even our boasted knowledge of to-day? As an instance we may take the reference to cancer as infective. Although we are still disinclined to accept it the disease affords us indications which support the view that it is to some extent communicable. The great factor which upsets all our calculations is the individual peculiarity which favours the development of a disease, and it is because we are unable to solve this problem that we must use every means in our power to prevent the products of infection being brought into contact with any member of the community.

A society has been established for this purpose the members of which intend to propagate information which will enable the laity in some measure to assist in the endeavour to control the disease. An eminent member of the profession has delivered a discourse on this subject wherein he chiefly lays stress on the danger of drinking milk and indicates the necessary means of avoiding this danger. He also recommends asses' milk as superior because less likely to be infected with tubercle. In this connexion it is interesting to note that Gideon Harvey had noticed this although he did not know the reason. Writing on the subject he says, "Asses' milk is universally preferred," and he goes on to give directions as to the diet of the ass—a matter which may or may not be of importance. In speaking of the treatment he is also very strong on the question of fresh air and change of air and also advocates change of food. "Neither it's only the change of air that proves so soveraing to Consumptives, but the change of Bread, Beer, Flesh, Company, and other circumstances do very much conduce thereunto." It is necessary to consider this question not only in the treatment, but also as a preventive, and although we are often met with the remark, "Oh! if I listen to you it is not safe to eat anything," it is nevertheless our duty to warn the public and teach them how to avoid disease. All authorities seem to be agreed upon the importance of safeguarding our food supplies, but although most elaborate precautions are taken for this purpose one of the prime sources of danger, at any rate as regards tubercle, is ignored.

Take, for instance, the inspection of bakehouses which is carried out in a fairly thorough fashion. The drains, the structure, &c., and all the appliances must be kept in a sanitary condition—i.e., in such a condition that germs will not be likely to flourish about them—but no notice is taken of the attendants, one or more of whom may be and often is suffering from phthisis, his body full of dangerous germs which are constantly fouling the atmosphere; the expectoration finds a rapid drying-ground and a temperature favourable to the life of bacilli, while the crevices in the already baked bread and other foodstuffs form a ready nidus for their reception and propagation. In these days, when hardly any bread is made in the homes, it is a question whether there is not even more danger from bread than from milk, for it is well known that phthisis is a prevalent disease amongst bakers. True, I have not got the scientific proof of my assertion and I might examine many loaves before I found tubercle bacilli. Many samples of milk might be examined with a negative result, but given the presence of tubercle bacilli in a bakehouse—and I suppose few would deny their existence there if the baker was suffering from phthisis—I do not think it is necessary to resort to scientific experiment to prove the danger. When phthisical subjects are being solemnly enjoined to carry receptacles for their sputum in order to avoid the danger of infecting the atmosphere of our towns surely there is no difficulty in realising the far greater risks in a bakehouse. Again, if it is necessary to rigidly supervise the sanitary conditions in order to ensure an atmosphere where food may be produced without fear of its being infected, surely it is approaching well nigh the ridiculous to permit an infected individual to be there present, to prepare the food, to handle it when prepared, to foul it with his exhalations and to deposit the products of his disease in and about the building. In the flour mill too phthisical workmen will often be found, and though the process of baking will perhaps sterilise the flour it is used for many other culinary purposes which may not.

Although I give the first place to bread my remarks apply to all consumable stores. If it is necessary to inspect the slaughter-house and to examine the meat, why except the butcher? Cooking should kill tubercle bacilli, but so should it destroy the eggs of the tapeworm, and yet in spite of this we annually extract many yards of this disagreeable denizen from the intestines which no doubt have been introduced in the same way as much of the tuberculous mischief finds entrance to our bodies. If ham, cheese, and butter require examination, why allow them to be retailed by a phthisical shopman? In like manner I might pass in review all articles of diet. I might even enter the sacred precincts of the domestic household and question the bodily condition of the cook and those who carry the food to the ultimate consumers. The position of safeguarding the food-supply and ignoring the condition of those who handle it seems to me a very untenable one and demands the immediate attention of those who are constituted the guardians of the public health. Will it take us as long to insist on the remedy as it has taken us to accept the fact of the infectious nature of tuberculous disease? Without expressing any disbelief in the views of Sir Richard Thorne and yourselves as expressed in your leading article of Dec. 3rd I venture to assert that the question I now raise is a point in favour of including phthisis among the dangerous infectious diseases which are compulsorily notifiable to sanitary authorities. I do not say that it proves the necessity of such an inclusion, but it does make for the necessity of investing all sanitary authorities with the power of inspecting not only the premises and the food, but also the bodies of those persons who are occupied with the food. This inspection should be no superficial formality but a rigid and thorough examination carried out at regular intervals.

In the meantime at the expense of being called an alarmist I would commend to the serious consideration of all thoughtful men the question of their food-supply. Do not be satisfied with boiling your milk; try to secure servants free from tuberculous disease and be particularly careful about your bread.

I am, Sirs, yours faithfully,

Kidderminster, Dec. 5th, 1898. J. LIONEL STRETTON.

THE COLLEGE OF PRECEPTORS.

To the Editors of THE LANCET.

SIRS,—I trust you will permit me to point out a serious inaccuracy in the first paragraph of the report of the Education Committee of the General Medical Council as printed in THE LANCET of Dec. 3rd (p. 1519), to which paragraph much importance appears to be attached in your first leading article. In the paragraph it is stated that—

> During the years 1892-98 returns have been made to the Council on behalf of the Examining Boards for the Navy, Army, and Indian Medical Services, respecting those candidates for appointments who showed deficiency in general education. In the case of 10 of these candidates the particulars given were insufficient to enable the preliminary examination to be traced; in the case 29 the examination passed by the candidate was one of those at present recognised by the Council. In no less than 14 instances the examination by which the candidate had gained admission to the Student's Register was that of the College of Preceptors, while the remaining 15 candidates had qualified by one or other of *nine* of the recognised examinations. There were, in addition, 16 candidates who had qualified for registration by means of the examinations of the Society of Apothecaries or the Royal College of Surgeons in Ireland, but the examinations have now for some years been discontinued.
>
> It thus appears that of all the examinations now on the Council's list the College of Preceptors' is that which most frequently gives rise to animadversion on the part of the examining boards and that the college contributes to the returns of comparative failure almost as many instances as all the other educational bodies together. It is also worthy of note that the returns report no single instance of deficiency in general education on the part of a student registered by means of a university local examination.

It cannot be doubted that the above statement, coming as it does in the forefront of the report, must have had great weight in determining the decision of the Council, and it might reasonably have been expected that scrupulous care would be taken to test its accuracy before making it public. A careful examination, however, of the published minutes of the General Medical Council, in which all such cases are recorded, shows the real figures to be as stated in the following table:—

Preliminary examining body.	Navy.	Army.	Indian.
College of Preceptors	1	1	—
Royal University of Ireland...	—	1	—
Royal College of Surgeons in Ireland	—	3	—
Royal Colleges of Physicians and Surgeons in Ireland	1	—	—
Apothecaries' Society	1	—	—
Apothecaries' Society and Edinburgh University	—	1	—
Aberdeen University	1	—	—
Trinity College, Dublin...	1	1	—
University of Edinburgh and Colleges of Physicians and Surgeons, Edinburgh	—	1	—
Not traced	8	2	7
Totals	13	10	7

It will be seen that the total number of cases is 30 and that of these only 2 are those of candidates who are reported to have obtained their qualifying certificates from the College of Preceptors. Both these cases, it may be added, are cases of deficiency in *spelling*, which is not quite the same thing as "general education."

I am, Sirs, yours faithfully,

H. W. EVE,
Dean of the College of Preceptors.

Bloomsbury-square, London, W.C., Dec. 7th, 1898.

"DIPHTHERIA ANTITOXIN IN PRIVATE PRACTICE."

To the Editors of THE LANCET.

SIRS,—You have done great public service in publishing several recent communications on the use of, and the neglect in using, the antitoxin of diphtheria. The admirably short and practical article by Mr. E. C. Bousfield in THE LANCET of Dec. 10th following upon those of Dr. Cobbett and Dr. Goodall can scarcely fail to correct the difference between the success of cases treated in private and in hospitals—a difference which used to be in favour of the private practitioner but which is now in favour of the Metropolitan Asylums Board hospitals. The correction, as Mr. Bousfield's experience shows, would be very quick, very obvious, and very satisfactory to private practitioners. My own experience, though very limited compared with his—for until of late years diphtheria used to be almost unknown in Highbury—is quite to the same effect. My object in writing is to say so and to encourge private practitioners in the use of the antitoxin. One great reason for the non-use of the antitoxin is the want of arrangements for getting it easily when wanted. The sanitary authorities of this parish have been most exemplary of late in supplying means for expediting and facilitating the diagnosis of typhoid fever and diphtheria. They would do great further good by having on hand a supply of antitoxin, on sale, but to be readily got by practitioners on any day and at any time of night or day.

It is sad to think what an amount of preventable mortality takes place in London and the country for want of such ready means of getting antitoxin. In regard to large sections of the population it is a question of money, and this is clearly a case where the remedy should be available at the public expense where the patient is too poor to command it.

One thing in this connexion must be gratifying to you—that in your editorial capacity you have repeatedly pointed out the grievous defect which has now been shown by your correspondents in a light which must throw a great responsibility alike on sanitary authorities and private practitioners. As private practitioners we are all anxious to show the advantage of private as compared with hospital treatment. Here is a case where we have an exceptional chance of doing so.

I am, Sirs, yours faithfully,

Highbury-place, N., Dec. 13th, 1898. JAMES GREY GLOVER.

To the Editors of THE LANCET.

SIRS,—It is with great pleasure that I have seen that the question of the early administration of antitoxic serum in cases of diphtheria has been again referred to in THE LANCET.

As an assistant medical officer in one of the Metropolitan Asylums Board hospitals I can confirm Dr. Goodall's statement that it is quite unusual for a patient to have been injected before admission and this in spite of the now well-known fact that early treatment is all important. Doubtless in many cases the patient's friends neglect to call in a medical man until the symptoms are severe and of some duration, hence, however prompt the notification and removal, such patients come into hospital late. If, however, we are to believe the statements of some patients' friends I am afraid that sometimes the fault lies with the medical attendant in not recognising either the nature or the gravity of the case. It is most disappointing and disheartening to residents in hospital to admit cases which they recognise at first sight to be almost certain to die and to find out that the patients have been under medical treatment for some days before being notified and that they have not been treated with serum. It seems to me that it is the absolute duty of a medical man to inject every child whom he *suspects* may be suffering from diphtheria as scon as possible after he sees such child. If this were the common instead of the, alas, uncommon practice I firmly believe that scores of lives would be saved every year in London. I hope that there is no difficulty in the way of obtaining the remedy and a suitable syringe seems to me to be a necessary part of a medical man's outfit in this city where the disease is so prevalent. The value of the remedy is now so universally recognised that it is no longer a question to be doubted.

My object in writing is to express a hope that THE LANCET will strongly take up the question of educating public opinion as to the necessity of seeking immediate medical advice in cases of "sore throat" in children and also to point out to medical men that it is in their hands often whether recovery or death shall ensue not only in cases remaining under their care but also in those admitted to a hospital. I am convinced that several of our patients would have recovered if they had been injected even only twenty-four hours before admission and many more if they had been injected two days before.

I am, Sirs, yours faithfully,

Dec. 12th, 1898. AN ASSISTANT MEDICAL OFFICER.

"THE 'OPEN-AIR' TREATMENT OF TUBERCULOSIS."

To the Editors of THE LANCET.

SIRS,—Dr. Lionel Beale is apparently under a serious misapprehension in regard to the practice of the open-air treatment. He seems to imagine that an "open shed" constitutes the whole provision made for the consumptive's residence, and that in this the patient has to sleep, dress, and take his meals. So far from this being the case it is well known to most practitioners that the treatment is usually conducted in well-appointed houses, that the bed-rooms are carefully warmed while the patients dress and undress, and that meals are taken in comfortable dining-rooms. The daytime only is spent in the sheds which are merely adjuncts to the main building and afford shelter from wind and rain while the patient lies out of doors. Under these circumstances I will not say that the patient's mind does not to some extent reflect the state of the skies, but as a matter of experience I think that the sense of well-being engendered by the open-air life together with a certain feeling of expansiveness that these patients enjoy have a greater effect upon their spirits.

I am, Sirs, yours faithfully,

Norwich, Dec. 13th, 1898. F. W. BURTON-FANNING.

THE FEES OF PUBLIC VACCINATORS IN THE WYCOMBE UNION.

To the Editors of THE LANCET.

SIRS,—The committee appointed by the meeting of public vaccinators of this union met the Finance Committee of the board of guardians to-day and agreed to the scale of fees subjoined. It shows in nearly every case an increase on that proposed by the board, the fixed amount being agreed upon owing to the difficulty in computing mileage:—

	Scale proposed.	Scale agreed to.
(*a*)	For the whole Union 1*s.* 0*d.*	2*s.* 0*d.*
(*b*)	District 1 ... 5*s.* 0*d.* Urban.	5*s.* 0*d.*
	,, 2 ... 6*s.* 0*d.* Rural.	7*s.* 6*d.*
	,, 3 ... 6*s.* 0*d.* ,,	7*s.* 6*d.*
	,, 4 ... 5*s.* 6*d.* Urban and rural.	6*s.* 0*d.*
	,, 5 ... 5*s.* 6*d.* Chiefly rural.	7*s.* 6*d.*
	,, 6 ... 6*s.* 0*d.* Urban and rural.	6*s.* 6*d.*
	,, 7 ... 5*s.* 6*d.* ,, ,,	6*s.* 6*d.*
	,, 8 ... 5*s.* 6*d.* ,, ,,	5*s.* 6*d.*
	,, 10 and 11 ... 6*s.* 0*d.* Rural.	7*s.* 6*d.*
	,, 12 ... 6*s.* 0*d.* ,,	6*s.* 0*d.*
(*c*)	... ... 2*s.* 6*d.*	2*s.* 6*d.**
	Union and schools ... 2*s.* 6*d.*	5*s.* 0*d.*

* With fresh arrangement if stational vaccination should be resorted to.

This was accepted by the board.

I am, Sirs, yours faithfully,

HUMPHRY J. WHEELER.

High Wycombe, Bucks, Dec. 13th, 1898.

THE PRESENTATION TO MR. E. M. OWENS.

To the Editors of THE LANCET.

SIRS,—Every surgeon in the mercantile marine will peruse with pleasure the note in THE LANCET telling of the presentation to Mr. E. M. Owens of the s.s. *Nineveh* and will congratulate that gentleman, while at the same time they will compliment the captain and owners on the recognition of the "single-handed" ability of their surgeon. It is rarely such an appreciation is given of work well done at sea, hence the more reason it should be emphasised. The time has gone by when a surgeoncy at sea was regarded as the "refugium peccatorum." Nor does one read in the papers "that this ship carries a doctor and a cow." Nowadays the position of medical officer on board one of the great liners is very eagerly sought after, while to get a return trip to some favourite port is so coveted that men of the best reputations are willing to pay a fee of two guineas and do the work for nothing, much to the detriment of many young men who require to be paid for the service. I hold that no man in a professional capacity has more responsibility on his shoulders than the surgeon of the modern steamer, whether it be an Atlantic liner with sometimes 2000 people to look after or one of the numerous vessels going to South America, Africa, or Australia; and by the way, these ships do not come as a rule under the surveillance of the medical department of the Board of Trade. Medical men at sea cannot send round the corner for advice or assistance; whether it be "a clinker in the eye" or a "strangulated hernia" they must be ready and able to operate at a moment's notice; therefore the surgeon at sea must be self-contained, self-controlled, and capable of coping with any emergency. There are no V.C.'s for the surgeons of the Mercantile Marine, although I know men who have done deeds worthy even of that high prize. It would be interesting if Mr. Owens would publish his case in THE LANCET, as, apart from the interest of the paper, many a man who through carelessness or modesty has neglected to register his experience would now perhaps contribute something of the medical, surgical, or hygienic conditions of sea life which I have no doubt would be full of interest and instruction.

I am, Sirs, yours faithfully,

Henrietta-street, W., Dec. 12th, 1898. R. A. CALDWELL.

A FERTILE ALTHOUGH UNSUSPECTED SOURCE OF BACILLARY INFECTION.

To the Editors of THE LANCET.

SIRS,—From cases of pulmonary tuberculosis which have come under my own observation I am of opinion that in many instances diseased cage-birds, such as canaries, linnets, &c., communicate tuberculosis to a serious extent amongst human beings. As about 400,000 canaries are reputed to be sold every year in the United Kingdom the distribution of tubercle by this bird alone, when disease attacks it, must be considerable. In a recent work by Friedberger and Fröhner[1] it is stated that tuberculosis is one of the most common diseases of birds. I hope in a short time to send you evidence from cases which I have investigated in support of my assertion.

I am, Sirs, your obedient servant,

Montreux, Switzerland. TUCKER WISE.

"A CASE OF DEATH FROM DIABETES MELLITUS IN WHICH THAT DISEASE GAVE NO PREMONITORY SYMPTOMS."

To the Editors of THE LANCET.

SIRS,—In reply to Dr. Pavy's letter in THE LANCET of Dec. 3rd in reference to the case published under the above title on Nov. 26th I should like to make one or two remarks.

On reference to the case in question it will be seen that I never for one moment lost sight of the fact that the attack might have been one of an apoplectic seizure but was driven to the diagnosis I adopted from the following succinct reasons:—1. There were none of those signs present which one would have expected to have found if the attack had been one of apoplexy. (*a*) The arteries were in excellent condition for a woman of her age. There was no sign of atheroma in the peripheral arteries and no sign or history of syphilis to account for an arterial degeneration of that description. The pulse, too, was free from tension. (*b*) The heart was normal in every respect. There was no hypertrophy, no murmurs of any description, and no accentuation of second sound. 2. The presence in the urine of a somewhat large amount of glucose (16 grammes per 1000), which I ventured to think was greater than would have been the case if it had merely been a temporary glycosuria accompanying an apoplectic stroke. 3. Of the "air-hunger" symptom I will only say that this, in conjunction with the afore-mentioned signs, assisted me, but only in an indirect manner, in confirming the diagnosis I arrived at.

I do not see that there should be any more "disquietude" in connexion with a case of this kind than there is with an apoplectic seizure itself. In fact, I think that the latter—which, as is well known, may occur with little or no premonitory symptoms—is of a more alarming nature than a case of diabetes mellitus which ends in a similar manner; for surely if such a case be diagnosed early its

[1] Friedberger and Fröhner's Veterinary Pathology. Translated by M. H. Hayes, F.R.C.V.S. 1896.

conditions might be ameliorated by prescribed diet, &c., and thus banish or postpone for an indefinite time a coma which otherwise might prove shortly inevitable.

I am, Sirs, yours faithfully,

Dec. 6th, 1898. T. WILSON PARRY.

"BILATERAL ACUTE LABYRINTHITIS."

To the Editors of THE LANCET.

SIRS,—In your last issue you describe the case related by Dr. Percy Webster in the *Intercolonial Medical Journal* as a very rare one. As a *primary* acute labyrinthitis it certainly would be so, but after reading the notes one cannot help thinking that the case was one of cerebro-spinal meningitis with *secondary* implication of the labyrinth, a by no means rare complication of the disease and one which aural surgeons fully recognise as being a cause of deaf-mutism in children.—I am, Sirs, yours faithfully,

Harley-street, W., Dec. 12th, 1898. ARTHUR H. CHEATLE.

THE INFLUENCE OF THE NERVOUS SYSTEM IN HEART DISEASE.

To the Editors of THE LANCET.

SIRS,—In his Purvis Oration on Some Points in the Treatment of the Chronic Forms of Heart Disease due to Rheumatism, published in THE LANCET of Dec. 10th, Dr. Sansom described a case of cardiac dilatation in which remarkable benefit followed the use of galvanism in the course of the vagus, and suggested that "special treatment of the nervous system in rheumatic diseases of the heart is in many cases of very high importance." In this connexion the researches of Balint, published in the *Deutsche Medicinische Wochenschrift*, Jan. 6th and 13th, 1898, appear to me to be worthy of notice. By Rosenbach's method and also by a hooked sound Balint produced aortic incompetence in dogs, cats, and rabbits. In certain cases two of the aortic cusps were torn off. The animals were kept under observation till death. Hypertrophy of the heart was the invariable result, but there was no failure of compensation even when two of the valve cusps had been removed. The maximum period of observation was 293 days Balint then injected phosphorus oil after ablation of the valves as in the previous experiments. Fatty degeneration of the heart muscle was thus produced, but there was no failure of compensation. This, of course, bears out clinical experience. The fatty degeneration of the myocardium in pernicious anæmia, &c., is not attended with the phenomena of broken compensation. In his next experiments Balint cut one or both vagi after the removal of the valves. In dogs and cats loss of compensation occurred, even when one vagus was divided long after the destruction of the valves. In rabbits no such effect was produced. No change was found in the myocardium in these cases. Balint concludes that the nervous mechanism of the heart plays a very important part in the disturbance of compensation. These experiments have so great a bearing upon Dr. Sansom's clinical observations that further work appears to be demanded upon the same lines.

I am, Sirs, yours faithfully,

JAMES H. SEQUEIRA, M.D., M.R.C.P. Lond.,
Medical Registrar, London Hospital; Physician to the North-Eastern Hospital for Children.

West-street, Finsbury-circus, E.C.

THE ROYAL COLLEGE OF PHYSICIANS OF LONDON AND "TRADE."

To the Editors of THE LANCET.

SIRS,—What is truth? said jesting Pilate. What is trade? might be seriously and anxiously asked by many a medical man, especially by those familiar with by-law 176 of the Royal College of Physicians of London, which ordains that "no Fellow or Member of the College shall be engaged in trade, or dispense medicines, or make any engagement with a chemist or any other person for the supply of medicines, or practise medicine or surgery in partnership, by deed or otherwise; or be party to the transfer of patients or of the goodwill of a Practice to or from himself for a pecuniary consideration."

If, for example, the President or any of the Censors or anyone else were to establish a grocer's shop, write his name over the front and devote the intervals of time unoccupied by his public and private professional duties to weighing out and selling tea and sugar over the counter, there would be no need to ask the question in such a case, for he would be indubitably engaged in trade. But if, instead of selling tea and sugar (or anything else) in a shop of which he is the sole proprietor, he becomes a shareholder in Lipton's or any other public limited company, is he not equally engaged in trade? He might perhaps purchase and hold shares in one of the numerous "stores" which sell, among other promiscuous things, "patent" or quack medicines, and thereby derive profit from this pernicious class of goods. He may, moreover, be not merely a shareholder, but a director of the company, and thus take an active and responsible part in its management. If so, is he not still further engaged and immersed in trade?

Everyone knows (through the advertisements which are so liberally distributed) that several Fellows of the College sit on the board of the Clerical, Medical, and General Life Assurance Company. Others are to be found on the managing committee of a Coöperative Wine Society, Limited, which, if not an association trading for direct and immediate dividends, at least trades judiciously so as to obtain the best results and strives to avoid pecuniary loss. I do not find fault with such gentlemen for being thus connected with honourable and useful commercial undertakings and I do not think such employment to be "derogatory to the position of a physician" necessarily. The possession of business capabilities is a credit to their owner even if he be a statesman and the talent should not be hidden away in a napkin and buried. But is its exercise consistent with the College by-law and is the by-law itself unexceptionably reasonable? Or perhaps—

> "That in a captain's but a choleric word
> Which in a soldier is flat blasphemy."

I am, Sirs, your faithfully,

Dec. 6th, 1898. PUZZLED

"AN ACADEMIC GOWN FOR THE MEMBERS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND."

To the Editors of THE LANCET.

SIRS,—Please oblige by the following correction. In the second paragraph and third line of my letter the word "sash" should have been "cap."

I am, Sirs, yours faithfully,

THE SECONDER OF THE RESOLUTION FOR THE
Dec. 12th, 1898. MEMBERS' ACADEMIC GOWN.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The Spread of Plague.—Anticipations of further Outbreaks.—The Disturbances in Mysore.—Nursing under Difficulties.—The New Agreement with the English Plague Medical Officers.

THE gradual spread of plague in the southern portions of the Bombay Presidency, in the Mysore territory, and in the Madras Presidency still continues. Other parts are at present free with the exception of a few cases at Karachi, in the Punjab, in Cutch, and in the city of Bombay. Plague has broken out in the Central Provinces at a place called Hinganghaut, about 40 miles from Nagpore. The so-called necessary precautionary measures towards staying the spread of the disease are reported to have been instituted. These consist apparently of segregation camps and hospitals with disinfection on an extensive scale. The already condemned quarantine is once more applied. Notwithstanding that the weather conditions are just now admittedly favourable nothing is heard of clearing out the people *en masse*—the only remedy which has hitherto proved of any material value. If this were done the annoyance of all other measures might be avoided. With reference to the outbreak at Rahon in the Punjab it appears on further inquiry that the disease has long been concealed by the inhabitants from fear of the regulations adopted for dealing with plague in the country around. The connivance of the native police at this concealment has been proved and there are probably many more cases than those which have been brought to light

A report has been spread that plague had broken out in Delagoa Bay, but it has not been officially confirmed. Some time ago it was said that certain forms of a bubonic disease had been observed in Uganda, but its identity with plague was never definitely established. Little or nothing has been heard about it since.

There have been serious disturbances at Seringapatam. Thousands of persons with all sorts of improvised arms attacked the police and endeavoured to rescue the prisoners, but very prompt measures seem to have been adopted and 13 rioters were killed and large numbers were wounded.

It is anticipated, apparently, by the plague authorities in Bombay that another recrudescence may occur at no very distant date. For this reason camps are being maintained and the services of the English Plague Sisters are being renewed for a further period. Against the early development of another recrudescence is the fact that Bombay has only just passed through an abortive third outbreak which attained its maximum the first week in October. An interval of quiescence at any rate may first be hoped for. Plague has by no means left the city, but only 33 deaths from it were recorded for the past week.

The Presidency plague mortality for the past week shows a considerable improvement, although in the southern parts it is still raging with severity. In the Satara district there were 370 deaths, in the Belgaum district 915 deaths, in the Dharwar district 1873 deaths, and in the political agency of Kolhapur 466 deaths. The total mortality from plague for the week was 3990, being 868 fewer deaths than during the previous week.

Madras city records only 2 seizures and 2 deaths. In the districts there were 32 seizures and 30 deaths. More medical men have been requisitioned to supplement the medical service in this Presidency.

It is reported that at Bangalore, where the outbreak is very severe, some 35 closed-up and deserted private dwellings, warehouses, and shops were forced open. Dead rats were found in nearly every building. The buildings were subsequently disinfected and ventilated. It is also reported that bullock carts which had been used to convey dead bodies (three and four at a time) to the cemeteries and which had not been disinfected have been used by people fleeing from the town by the ordinary road routes. The military are now being used in Bangalore and are doing excellent work in the congested low caste localities, detecting large numbers of concealed cases every day. As yet no serious opposition has been shown to their employment. They proved of great value in Poona, but in Bombay the people rebelled against their employment.

At a village called Khed in the Poona district it is stated that there has been a severe mortality from plague amongst pigs. Now that the monsoon is over and the weather is favourable evacuation of infected villages is being enforced in many of the outlying districts of the Bombay Presidency.

The following figures are supplied to show the protection afforded by inoculation in the town of Dharwar:—

	Present population.	Total attacks.	Total deaths.
Once inoculated	3074	106	37
Twice inoculated	3557	17	4
Uninoculated	3089	1118	879

Plague has now almost disappeared from this town. To illustrate some of the difficulties of plague nursing in the remote districts may be mentioned the contrivance adopted at one place which was rapidly and severely attacked of utilising old kerosene oil tins for the construction of bed-pans so hard pressed was the staff for medical and nursing conveniences.

Many of the medical men sent out to India from England have been asked to continue their services under a new agreement. Although this offers a slight increase in salary it does not provide for leave, or for carriage allowance, or for exchange compensation. It binds the medical man for service for twelve months, whereas the Government can terminate the service in six months. It makes no provision for payment of money in lieu of a return passage if the medical man does not wish to return home direct. It definitely excludes any private practice and compels all the time to be devoted to plague duties. While admitting that the salary is fairly reasonable the other conditions are very unsatisfactory. The work is very rough and the medical experience is of little value. The time spent in India means "rusting" in other studies.

Nov. 26th.

THE EPIDEMIC OF TYPHOID FEVER AT BELFAST.

SECOND YEAR.

(FROM OUR SPECIAL COMMISSIONER.)

(Continued from p. 1585.)

ANY occurrence tending to delay the application of energetic sanitary reforms in Belfast cannot be considered otherwise than as disastrous, yet it must be confessed that the measures proposed are entirely lacking in comprehensiveness. There is no attempt to face the problem boldly in all its aspects. The fact that the whole of the sanitary services and arrangements of the town are fundamentally wrong has not yet been fully realised. The tendency is therefore towards patchwork remedies and a little tinkering here and there. To begin with there should have been a system of main sewers for both sides of the river instead of bringing the sewage from the south side over to the north side by means of a syphon under the river. On the Antrim side the main collecting sewer could have been prolonged to the deep sea. On the County Down side it should also have been conducted to the sea. This was proposed at the time that the sewers were built but rejected on account of the cost. Now sooner or later the town will be compelled to incur much greater cost, for there is nothing more extravagant than short-sighted economy. The extension of the borough boundaries so that they now include all the surrounding suburbs renders it even more urgent to reconsider the whole drainage scheme. In some of these added districts, such as Ligoniel, the fall is ample, and here notices are being served on householders to connect with the main drainage system. But what is going to be done in the Lower Sydenham and Green Castle districts where the ground is below the level of the high tide? This part is only protected by an embankment and may be flooded at any moment if an accident occurs to this slender barrier. At Lower Sydenham the owners of land are told by the municipality to raise the level of their ground artificially before they begin to build upon it, otherwise it will be impossible to drain their houses. The owners of the property declare, however, that this would so increase the cost of building that the houses could no longer be let at a remunerative rent. But why do people buy land for building which is obviously not suited for that purpose? Such blundering is not a sufficient reason for imposing extra high rents on tenants, or else for allowing them to live in houses which by reason of the unwholesome ground on which they stand will engender disease and shorten life. It is time that the voice of the tenants should be heard—they are the vast majority; and even from the financial point of view it would pay to attend to their interests. Councillor Jaffe pointed this out to me in a very business-like manner. He argued that even among the poorer sections of the community a death might be estimated as involving, in the cost of the funeral, the medical attendance, &c., a clear loss of on an average £10 per person. There is no reason to doubt but that with proper sanitation the death-rate of Belfast might be reduced 4 per 1000 per annum. This would mean the saving in twelve months of something like 1200 lives. This is something to go upon in arguing from the humanitarian point of view and those who now actively resist sanitary reform should be made to understand that they are actively helping to kill more than 1000 of their fellow citizens per annum. But Councillor Jaffe did not discuss this point of view, his mind was, for the time being, wholly concentrated on figures and he urged that 1200 preventable deaths meant a needless loss of £12,000 to the community. For this annual sum at 4 per cent., which was enough to include amortisation, £300,000 could be borrowed. This would go a long way to remedy the sanitary defects of Belfast. But if this were done a much larger saving would be realised than the loss involved by deaths, for a still greater and more expensive amount of sickness would also be prevented. For instance, last year there were 336 deaths from typhoid fever, but there were 3269 cases of this disease notified. What applies to typhoid fever applies also to other diseases. Thus the cases which were not fatal, being so much more numerous, must have occasioned a far greater financial loss than that represented by the deaths alone. If on the latter an

economy can be realised that would suffice to defray a loan of £300,000, then an expenditure of £1,000,000 could be covered by the saving to be realised on the prevention of both deaths and sickness. Nor is there anything extravagant in such an anticipation, for the reduction of the Belfast death-rate by 4 per 1000 would still leave Belfast with a death-rate slightly in excess of that of London. But for every 100,000 inhabitants in Belfast there are more than 1,000,000 inhabitants in London. Belfast also is a new town built after the truth of the modern principles of sanitation had been proved and were generally known. Nor should there be as much poverty and overcrowding in Belfast as in London. Then Belfast has the advantage of proximity to the sea, for the broad salt waters of the Lough are within two miles of the town and constitute an arm of the sea. Finally, if Belfast is as pious as it professes there should be less vice and drunkenness than in London. The death-rate should therefore be below and not above that of London.

There are few towns where so much religious fanaticism is displayed as in Belfast and yet the sense of public duty has been constantly obliterated by the desire to make money. For the sake of money the law has been set at defiance and this by the very persons who are entrusted with the duty of applying the law. This is very clearly set forth and chapter and verse are given in what is known as the Harrison Report which I fully analysed last year.[1] The Public Health Act of 1878 stipulates that ashpits shall be properly covered, that there shall be back passages, that houses shall not be built on ground impregnated with fæcal, anima[l], or vegetable matter, yet these rules in many instances were not applied. The result of such negligence is that typhoid fever is endemic when it does not assume the epidemic form, and Belfast has a much higher death-rate than London, though, with the advantages it possesses, it should have a much lower death-rate. Yet even at this hour and in spite of the clear evidence of undeniable facts the chief transgressors are ever seeking to mask their own shortcomings by accusing others. Thus, for instance, I have met owners of bad property who lay all the blame on the water-supply and on the factory system. It has never been proved that the water-supply was contaminated before it reached the houses, but the pollution of the subsoil and the insanitary condition of the houses, the privies, and the drains have been demonstrated over and over again. Nevertheless, the owners of this insanitary property try to show that if it is not the water then it is the factory system which causes the epidemics. The house-owners object to spend money to put their property in order, but they do think that the manufacturers should pay higher wages. The women workers at Belfast are not organised as in Lancashire, they consequently cannot maintain the Lancashire rate of wages and earn much less. While at work they neglect their children, and the latter go to work too soon as half-timers. The wretched pay which they obtain means that they must live on insufficient food. Also they have contracted the fatal habit of spending a large portion of their slender earnings on tea which they boil for a long time, thus extracting all the injurious properties of the leaf. Tea and bread-and-butter too often constitute the staple food. So clear is it that the workers suffer from insufficient food that some of the better and more generous employers have established soup-kitchens in their manufactories. This is notably the case at the Jenimount Mill where soup is provided for the workpeople at a charge below the cost price. Doubtless there is some truth in the complaints, but two blacks do not make one white. The wages undoubtedly are very low, but there are opportunities of obtaining employment in Belfast not so easily found in most other towns. There are many light trades in which women and girls can earn some money; thus all except the young children are often able to earn something. Though the individual earnings are small the collective incomes of the entire family often amount to a fair sum. Also the large number of workmen employed in the ship-building yards earn much higher wages and yet typhoid fever has been rife in their families as well as among other sections of the community. Undoubtedly the fact that the mother is at work in a mill renders it almost impossible to maintain a healthy and cleanly home. This objection, however, applies to other manufacturing towns where typhoid fever is not so constantly and disastrously prevalent. Of course, it is very difficult to maintain good sanitation in the midst of poverty; but that difficulty is increased to an incalculable extent when the houses inhabited by these poor people are deliberately built on infected soil and are devoid of the most essential necessities for the preservation of health. Then, again, if poverty is so very prevalent in Belfast, how is it that working people from all parts of not only Ireland but even of England crowd to that town in the belief that they will be able to earn better wages? Intemperance, combined with the want of orderly, cleanly, and economical habits is undoubtedly a great factor in the spread of disease; but these predisposing causes are not special to Belfast; they are great evils, but they exist elsewhere. It would be difficult, however, to find elsewhere so complete a disregard of the elementary principles of sanitation as that which has been displayed in the building of workmen's cottages in Belfast.

For many hours each day young children are left alone in these cottages. They play in a back-yard which is badly paved and drained. Close by is a privy and ashpit, it leaks or overflows in the yard, there are pools of stagnant water, and the children's hands and clothes are soon soiled with filth which contains organic material in decomposition. Some of this is carried with the fingers to the mouth. Where there is a little door to empty the ashpit this door is often not securely closed. The children force it open and amuse themselves pulling out some of the soiled contents of the ashpit. There is no one in charge to prevent them indulging in such a dirty and dangerous pastime. This, doubtless, has often been the cause of disease among children; and it may well be said that if better wages were paid there would be no need for thus leaving the children alone. But, on the other hand, if, instead of a filthy, open, leaking privy, there was a properly-constructed water-closet, if the receptacle for household refuse and ash was securely covered and closed, if the yard was efficaciously drained and well paved, these children, though neglected and left to their own devices, would not run so great a risk of contracting some disease. Where the back-yards are paved small tiles are very generally used. These are easily broken; the children can lift them up and soon gain access to the foul earth underneath. Holes and indentures are formed in which dirty water remains stagnant. In a short time the children are left to play all day long on what is little better than a dung-heap. Such yards should be paved with heavy flagstones or in some other way rendered secure against the wear and tear to which they must be exposed. It does not seem, however, as if anything really effective had been attempted. A rule has certainly been enacted to the effect that where pigs are kept in a back-yard the pigsties must be built at a distance of at least 15 ft. from the walls of the house. This is a very small step in the right direction. The keeping of pigs in a town should not be allowed under any conditions. Then the distance of 15 ft. will be but a poor protection if the yard is not properly paved and drained and if the filth from the pigs can soak in the soil or flow towards the walls of the house—a condition of affairs which very generally prevails. Nor is it at all certain that the rule about the distance of 15 ft. is strictly applied. Even dispensary medical officers who act in the capacity of medical officers of health in their districts are, I was assured, not always disposed to testify before a court that a pig constitutes a nuisance. It would be incurring the risk of great unpopularity to enforce sanitary measures against pigs in Ireland, yet this must be done if the Irish wish to live healthy lives in large towns.

(To be continued.)

[1] THE LANCET, Dec. 11th, 1897.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Manchester Royal Infirmary.

THE poll of the trustees of the Manchester Royal Infirmary asked for by Dr. Renaud on Nov. 21st was announced on Dec. 8th. 1284 voting papers were issued and 779 were returned, 12 being spoiled, with the result that the amendment was carried by a majority of 341. It may be remembered that the resolution was in favour of rebuilding on the present site, while the amendment asked the infirmary board to re-open negotiations with the corporation with a view to the sale of the whole of the infirmary area, necessitating, therefore, the removal of the hospital to another site, but with the

proviso that there should be an accident and out-patients' department in the centre of the town. The amendment having now become the substantive resolution will have to be voted on at another meeting of the trustees. If it should be adopted the way will be open for negotiation with the corporation for the sale of the infirmary site. Assuming that these negotiations are successful the corporation can no doubt provide a considerable amount of the purchase money by the sale of the old town-hall in King-street, now used as the free reference library, and of the art gallery, formerly known as the Royal Institution, in Mosley-street. In the opinion of one of the weekly papers the latter would be "an admirable building for the reception of accidents, emergency cases, and a dispensary for out-patients." It would have one qualification, publicity, as it is in one of the best known and most frequented streets in Manchester; but it would therefore command a very high price and the interior of the building would require complete re-arrangement, while it is doubtful if there is sufficient ground space. There would not be much difficulty in finding a suitable and not extravagantly costly site for this central building. As to the position of the infirmary itself there will be much discussion and great differences of opinion. Some members of the staff favour the Stanley Grove site in Oxford-road, not very far from Owens College, and with the Whitworth Park, a picturesque and extensive open space, on the opposite side of the road. A great deal may be said for this site in addition to the fact that it was offered in 1896 by the Whitworth trustees practically as a free gift and it is believed that the offer is still open. If this site is passed over the reasons for doing so ought to be of extreme cogency.

Oldham and the New Vaccination Act.

Even those who most regretted the passing of the new Vaccination Act could have little anticipated the scenes—which might be called farcical if not fraught with evil presage for the future—which have followed that well-intentioned but weak and disastrous measure. Two special sittings of the Oldham justices were held on the evening of Dec. 8th beginning at six o'clock to grant certificates of exemption. Two courts were held to speed on the work, one for women and one for men. Four magistrates were in the men's court and two in that for the women, but they were unable to cope with the crowds that crushed into the corridors and every passage available. They sat from 6 P.M. on the Thursday to 1 A.M. on Friday morning, but before that time the applicants lost patience, "expressed their feelings in vehement language"—which phrase used with reference to the Oldhamese tongue means something exceedingly strong—"turned on water-taps in the neighbourhood and generally turned the town-hall into a pandemonium." The six unhappy magistrates are said to have signed at least 7000 certificates in the seven hours, having no doubt weighed carefully each objection to make sure that it was "conscientious." The total number granted up to that time was 17,000 and since then further sittings have been held to provide pabulum for the next visitation of small-pox. It is said that there are 40,000 anti-vaccinationists in the borough, "and as printed forms of the certificates can be obtained up and down the borough further scenes may be expected." The ignorance of these naturally quick and, in a narrow way, shrewd and clever people is something extraordinary and their proceedings under the recent Act inclines one to doubt their fitness for this measure of home rule. Somewhat similar scenes are reported from Ashton-under-Lyne, Stalybridge, and other places in the north. "Several hundred exemption certificates were granted at Keighley yesterday." When Nemesis appears will Parliament or the people be held responsible?

Salford Sanatorium.

It is proposed to enlarge the Salford Sanatorium by the addition of two convalescent pavilions for scarlet fever and typhoid fever patients, with accommodation for nurses and a resident medical officer. At present two large pavilions are always occupied, leaving only one for other diseases, and convalescent and acute cases have to be mixed up in one ward, while lately there has been increased difficulty through a small epidemic of typhus fever. Application is to be made to the Local Government Board for sanction to borrow £19,550, the estimated cost of the additions.

Proposed Sanatorium for Phthisical Patients.

A deputation from the Manchester and Salford Sanitary Association was received by the Health Committee of the Salford Corporation on Dec. 8th. Its object was to suggest to the corporation the desirableness of providing a sanatorium for phthisical patients. Dr. Leech and Dr. Williamson put before the committee cogent arguments in favour of their suggestion and the rector of St. Stephen's, Salford, stated from his knowledge of the people in the neighbourhood of the town-hall that he could confirm all that Dr. Leech had said as to the existence of conditions favourable to the spread of phthisis. The deputation was received with sympathy but was reminded of various difficulties (including cost) in dealing with the matter and the chairman invited the Sanitary Association to provide lecturers on the subject of the prevention of phthisis and said they would find audiences. Dr. Leech promptly agreed to this and also to a suggestion that the association should organise a conference of all corporate, Poor-law, and hospital authorities in the district to discuss the subject. The association intends to interview various other authorities.

Dec. 14th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Reception at the Royal College of Surgeons of Edinburgh.

THE reception given by the President of the College and Mrs. Chiene, reference to which was made in THE LANCET of Dec. 10th, passed off with great *éclat* and was largely attended by the members of the profession in the city and its neighbourhood and their wives.

Edinburgh University Total Abstinence Society.

This society is to be addressed on Thursday, Dec. 15th, by Dr. G. Sims Woodhead of London, who takes such a prominent place in the temperance movement.

The Christmas Vacation in Edinburgh.

The medical classes will rise for the Christmas vacation on Wednesday, Dec. 21st, and will resume work on Wednesday, Jan. 4th, 1899.

The Scottish Cremation Society.

The annual meeting of this society was held in Glasgow on Dec. 7th, the chair being taken by Sir Chas. Cameron, Bart., M.P. In moving the adoption of the report the chairman alluded to the relatively slow progress of the movement but considered that this was to be expected in the very nature of things. The number of cremations during the last year was 10, but at the Woking crematorium similar slow progress had been experienced at first. He detailed the safeguards insisted upon by the directors with a view to guard against cremation in any case of foul play and contended that these regulations were a far more complete protection to society than the present rules governing the registration of deaths which latter he described as scandalous. The meeting was also addressed by Professor Sir Henry Littlejohn and by Dr. Ebenezer Duncan.

Sanitary Matters in Paisley.

A further contribution to the conflict between the Paisley local authorities and their medical officer of health is furnished by a report from Professor R. M. Buchanan of Anderson's College Medical School who has made an elaborate bacteriological examination of samples of the domestic water-supply collected during the recent outbreak of enteric fever. This examination failed to detect the typhoid bacillus, but the report submits reasons why this negative result is not to be considered conclusive, and moreover, affirms that as the samples contained pseudo-typhoid and coliform bacilli in large numbers there is abundant evidence of sewage pollution.

The Greenock Fever Hospital.

The local health authorities have received from Mr. R. Murray, inspector under the Local Government Board, who some time ago paid a surprise visit to the hospital, an intimation that the Board is of opinion that the accommodation in the fever hospital is insufficient for the needs of the district. The health committee has therefore to face the prospect of building a new hospital.

Committee on Reformatories for Inebriates.

Among the witnesses recently examined by this committee

appointed by the Secretary for Scotland are Dr. J. F. Sutherland, deputy commissioner in lunacy for Scotland, and Dr. John Wyllie, consulting physician to the Edinburgh Royal Infirmary.

Dec. 14th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Richmond (Dublin) Lunatic Asylum.

AT the meeting of the governors of the Richmond District Lunatic Asylum held on Dec. 9th the medical superintendent (Mr. Conolly Norman) reported that a patient in one of the female wards was recently found to be suffering from fracture of one of her ribs and that no explanation of the injury could be elicited from the nurses in charge of the patient. He strongly urged that they should be all dismissed.

Cork-street Fever Hospital and House of Recovery, Dublin.

At the meeting of the Managing Committee of this institution on Dec. 8th the registrar reported that scarlet fever cases showed a marked decline in numbers but an increase in the severity of the type of disease prevailing. A few cases of typhus fever were admitted, one from outside and the others from inside the municipal boundary. Enteric fever cases maintained the usual average. Several cases of pneumonia which proved rapidly fatal were admitted during the latter part of the month. Several cases of measles were admitted from institutions and a few patients suffering from diphtheria. The last-named disease has never been severely prevalent in Ireland.

Death of Dr. James Hamilton of Bray, co. Wicklow.

Dr. James Hamilton whose death took place at his residence in Bray on Dec. 9th was a graduate of the University of Dublin having obtained the degree of M.B. in 1872. Dr. Hamilton was a comparatively young man in considerable private practice and his untimely death is much deplored in the district.

The Water-supply of Belfast.

Two very important letters have been published in the Belfast papers in reference to the chemical analysis of the water supplied to the city. One is from Dr. Letts, Professor of Chemistry in Queen's College, and states that he has repeatedly expressed the view that the water is not of good quality, basing his opinion on the results of frequent examinations which show that the "albuminoid ammonia" has often risen above 0·02—"the oxygen absorbed" amounts to from 0·3 to 0·4 and the "organic nitrogen" exceeds 0·02—and on the fact that the sources of the water were liable to dangerous pollution. In conclusion he advises that "the less the town supply is used by its inhabitants for drinking purposes the safer it will be for them." The second letter is from the demonstrator in chemistry in Queen's College, Mr. R. F. Blake, F.I.C., F.C.S., who gives an analysis made on Dec. 3rd of water drawn from a tap connected with the main in the chemical laboratory of Queen's College. He states that his figures condemn the water as utterly unfit for drinking purposes owing to its pollution by an excessive amount of organic matter of vegetable origin. He found 0·0185 part of albuminoid ammonia per 100,000. Having given the results of his own analysis he proceeds to criticise those of Messrs. Barklie and Hodges who were asked by the Water Commissioners to examine and report. He shows first that their results differ considerably, as, for instance, the one finding 0·026 part of organic nitrogen per 100,000, while the other only obtains traces of organic ammonia; while there is every reason to believe that 0·026 part of organic nitrogen would yield 0·019 part of organic ammonia which is not a trace but more than sufficient in itself to condemn the water. Mr. Barklie says that his chemical examination of the water was satisfactory and that the water-supply of Belfast is at present purer than at any other period. But Mr. Blake asks, Is a water with 0·026 part of organic nitrogen satisfactory? Dr. Percy Frankland in 1892 found this amount in an analysis of Belfast water and he suggested filtration, but there is the same amount in the "filtered" water analysed by Mr. Barklie. The filtration at Stoneyford, Mr. Blake therefore concludes, has done no good. Again, Mr. Blake asks, Why has Mr. Barklie omitted to determine the albuminoid ammonia? Dr. Percy Frankland did so in 1892 and found 0·019 part per 100,000, corresponding to 0·026 organic nitrogen. How then, asks Mr. Blake, can Mr. Barklie state that the Belfast water is purer than at any other period when according to Dr. Percy Frankland we know that 0·026 part of organic nitrogen corresponds to 0·019 part of albuminoid ammonia (as far as this water is concerned) and Mr. Barklie himself found in 1887 as little as 0·014 part per 100,000? Mr. Hodges from his figures says he does not consider the water polluted with animal matter, though it does contain organic matters of vegetable origin somewhat in excess of the quantity found in a previous examination. Mr. Hodges says in his analysis that there are only traces of albuminoid ammonia which means that the water is practically free from organic matter of vegetable origin; but Mr. Blake rejoins that this is not consistent with the report or with the fact that the water was said to be of a greenish-yellow colour due probably to the peaty matter it contained. Further, the water is said to contain as much as 0·004 part of free ammonia per 100,000. Mr. Blake says he knows of no case nor has he seen mentioned in any text-book an example of an "upland surface" water of a greenish-yellow colour yielding so much free ammonia with only traces of albuminoid ammonia. Mr. Hodges's figures give for the "ammonia" from the Woodburn supply only traces, which Mr. Blake says indicates that the water is practically organically pure and of the very first class. Such waters are, however, not usually yellowish-green in colour. I append the analyses of Messrs. Barklie, Hodges, and Blake in parts per 100,000 in a table.

—	Stoneyford.		Woodburn.		Town main.
	Hodges.	Barklie.	Hodges.	Barklie.	Blake.
Total solids	14·3	12·5	13·7	16·93	16·7
(*a*) Volatile	—	—	—	—	5·0
(*b*) Fixed	—	—	—	—	11·7
Total hardness	7·85	—	9·3	—	10·0
(*a*) Temporary	—	—	—	—	3·3
(*b*) Permanent	6·43	—	7·85	—	6·7
Chlorine	1·14	1·11	1·57	1·8	1·55
Free (or saline) ammonia	0·004	0·000	Traces.	0·000	0·000
Albuminoid (or organic) ammonia	Traces.	—	Traces.	—	0·0185
Organic carbon	—	0·4	—	0·36	—
Organic nitrogen	—	0·026	—	0·02	—
Nitrogen as nitrates and nitrites	Traces.	0·009	Traces.	0·01	0·000
Total combined nitrogen	—	0·035	—	0·03	—
Oxygen absorbed in four hours at 80° F.	0·243	—	0·157	—	0·3396
Oxygen absorbed in two hours at 80° F.	—	—	—	—	0·3064

Refuse Disposal and Sewage Purification.

At the Belfast Natural History and Philosophical Society a paper was read on this subject by Mr. W. Chambers, C.E., in which he dealt broadly with those methods which would be serviceable to a city like Belfast situated on a tidal estuary of the sea. An interesting discussion followed and among other matters a communication was read from Dr. Letts, Professor of Chemistry, Queen's College, Belfast, in which he said there were three alternative methods for the disposal of the Belfast sewage: (1) irrigation; (2) the construction of a main sewer to some spot on Belfast Lough where the sewage would be swept out to sea by the turn of the tide; and (3) chemical treatment. Of these three the conditions for the first are unsuitable, the cost of the second would be too great, so that the third alone was really practicable.

Dispensary Medical Officers and the County Councils.

The question as to whether dispensary medical officers are disqualified by virtue of their office from being elected and acting as county councillors has been referred to the Local Government Board who in reply stated "that the Order

in Council dealing with the matter has not yet been made, but the Board consider that serious inconvenience might be caused to the sick poor if the dispensary medical officer undertook public duties of this nature outside his district."

Dec. 14th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Use of Oxygenated Water in Surgery.

AT the meeting of the Academy of Medicine which was held on Dec. 5th sundry speakers gave the results of researches which they had made upon the use of oxygenated water in surgery. M. Lucas Championnière said that during the space of one year he had made clinical trial of this agent and had found that oxygenated water was an antiseptic of remarkable power, and of special value in cases of suppuration or septic infection. Solutions of 10 or 12 parts by volume seemed to act best and were very superior to solutions of perchloride of mercury. A solution of oxygen is not only capable of checking putrefaction but will also prevent its occurrence. In vaginal hysterectomy a preliminary douching of the canal with this solution gives better results than any other antiseptic fluid. In cases of septic infection after abortion washing out the uterus with oxygenated water is just as satisfactory a method of treatment as curettage. In addition to the properties already mentioned oxygenated water is a hæmostatic. On the other side M. Charpentier argued that the liquid would not keep and moreover was an admirable culture medium for the streptococcus. M. Ferrand also spoke against it, saying that peroxide of hydrogen was not only an irritant but actually a caustic. M. Monod said that in his opinion nothing was better than a carbolic spray and M. Labbé agreed with him. M. Laborde spoke in his turn in defence of the oxygen solution, saying that it was absolutely harmless and could be used as an intravenous injection. In reply M. Lucas Championnière, while quite allowing that the solution in question was very unstable, argued that it could be obtained from the manufacturers in a state of great purity and was certainly far superior to phenol.

Thyro-iodine in Delayed Union of Fractures.

The Society of Surgery held a meeting on Nov. 30th, when M. Quénu read a paper upon the Use of Thyro-iodine in the Treatment of Fractures where Union is Delayed. M. Quénu brought forward two cases. The first was that of a young woman, aged twenty-four years, who owing to a fall sustained a compound fracture of the lower third of the femur. After reduction of the fragment suppuration occurred and a false joint formed. Three months after the accident—that is to say, in July, 1898—M. Quénu saw the patient who was then suffering from a suppurating false joint. Thyro-iodine was administered in capsules and by the fifth day the patient could walk aided by the support of a silicate splint. At present consolidation is practically complete. In this case, then, the administration of thyro-iodine was followed by a very marked growth of bone. In the second case consolidation took place satisfactorily, and although the patient had no thyroid gland, yet she absorbed the thyro-iodine with ease. The patient was a woman who was suffering from post operative myœdema following a thyroidectomy. Ordinary thyroid treatment relieved this condition but two months afterwards the patient fractured her leg. The fracture united in the ordinary space of time but she was treated with thyro-iodine during the whole time of healing of the fracture. M. Reclus brought forward a case occurring in one of his patients who had sustained a fracture of the thigh. Consolidation was very slow and in addition an enormous callus formed. Not knowing very well what to do for this condition it occurred to M. Reclus to give thyro-iodine. The effect of this was immediate, the callus disappeared with remarkable rapidity, and firm union was obtained. M. Reclus confessed, however, that in two or three other cases in which he had employed the same treatment the drug had no influence—a fact which he was quite unable to explain.

Statistics of Medical Students.

M. Brouardel, the Dean of the Faculty of Medicine, laid before the Council of the Academy at its last sitting some interesting figures dealing with the students and the subjects of study at the Faculty of Medicine. The number of students enrolled is 4495; the Faculty includes 351 male foreign students, of whom 16 are Swiss, 15 Germans, 60 Roumanians, 67 Ottomans, and 66 Russsans; there are also 87 female foreign students, of whom 83 are Russians. The 4495 students are studying the following subjects: for the degree of M.D., old regulations, 3261; for the degree of M.D., new regulations, 877; for the *officiat de santé*, 146; as midwives, 94; and as surgeon dentists, 117.

Obituary.

The death of Professor Laboulbene at the age of seventy-three years is announced. He had held the chair of Historical Medicine at the Faculty of Paris since April, 1879; was physician to the hospitals and a member of the Academy of Medicine. His clinical knowledge was unrivalled and he was also an expert naturalist, so much so that he would have held a chair of Entomology or Parasitology with as much distinction as he did that of History of Medicine.

Dec. 13th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

German Practitioners Abroad.

THE joint committees of the Berlin Practitioners' Associations (Geschäftsausschuss der ärztlichen Standes-Vereine) have asked the Imperial Chancellor that the German consuls may be instructed to supply the said committees with information as to places abroad where there may be openings for German practitioners. The Berlin Practitioners' Associations several years ago formed a medical agency of their own, conducted *honoris causâ* by members of the associations. This agency undertakes to procure locum-tenents for practitioners, both in Berlin and in the country, and to inform young medical men of available vacancies. As the medical profession is overcrowded and as the candidates are always more numerous than the places to be filled the task of this agency has become more and more difficult. The managers have therefore decided to provide facilities for German medical men who may desire to practise in foreign countries. In the petition addressed to the Imperial Chancellor it is requested that the consuls should supply particulars as to the conditions under which German medical men are allowed to practise in the countries in question, as to the capital required, and as to the time which is likely to elapse before practice becomes remunerative.

Improper Treatment by an Unqualified Practitioner.

At a recent meeting of the Berlin Medical Society Dr. Kutner showed a patient who had suffered considerably as the result of treatment by an unqualified person. The man having observed a "blister" on his penis, consulted an individual named Falbe and was informed that the complaint would last about ten weeks. Falbe then poured a corrosive fluid upon the penis, covered it with cotton-wool, and instructed the patient to apply bandages moistened with the same fluid, a bottle of which was given to him. The penis and the skin of the scrotum and the lower part of the abdomen became exceedingly swollen and the patient felt very ill, but was informed by the quack on several occasions that he was on the way to recovery. At last he consulted Dr. Kutner who found that the skin of the penis, the scrotum, and the abdomen was burnt and partly gangrenous, that the "blister" was a chancre, and that an indolent swelling of the inguinal glands and a syphilitic exanthem had developed. Dr. Kutner remarked that if medical men would more frequently bring forward instances in which actual harm had resulted from treatment by unqualified persons the effect might probably be that even those medical men who were opposed to anti-quackery legislation would become convinced of the necessity for repressing unqualified practice.

Diarrhœa in Strangulated Hernia.

A case of strangulated hernia without obstruction of the bowels is reported by Dr. Baron in the *Deutsche Medicinische Wochenschrift*. A woman, forty-three years of age, suddenly complained of severe pain in the right inguinal region, together with gastralgia, copious vomiting, and diarrhœa. A medical man consulted by the patient believed the symptoms to be due to acute gastro-intestinal catarrh and administered

tice by the mouth and morphia. When Dr. Baron saw the woman late in the evening she was vomiting bilious matter which had no fæcal odour; there were also profuse diarrhœa and a swelling in the right inguinal region of the size of a walnut. The skin over the swelling was normal, and there was no inflammation of the surrounding tissue. After injection of morphia the pain and the diarrhœa stopped. On the following morning an operation was performed and although there had been no symptoms of occlusion the above-mentioned swelling proved to be a strangulated hernia. After reduction of the intestine the pain and the other symptoms at once disappeared and the patient very soon recovered. Diarrhœa in strangulated hernia is a very rare occurrence; Malgaigne termed it "choléra herniaire" and believed that the prognosis was fatal. Dr. Baron is of opinion that in his case an acute enteritis preceded the strangulation and that the diarrhœal stools came from the portion of the intestine beyond the strangulated tract.

Affections of the Bladder in Workers with Aniline.

At the German Surgical Congress, Professor Rehn of Frankfort described some cases of growths of the bladder occurring in workmen employed in chemical factories, especially those where fuchsin is made. He expressed his opinion that the vapours developed in the manufacture of fuchsin produced an irritation of the uropoëtic system which finally led to the formation of malignant growths. Dr. Leichtenstern, chief physician to the Cologne General Hospital, writing in the *Deutsche Medicinische Wochenschrift*, states that long ago he also observed urinary troubles in these workmen, especially in the form of strangury and hæmaturia. He refers to similar observations made by Dr. Grandhomme of Hoechst, Dr. Stark of Cologne, and Dr. Bachfeld. Aniline and toluidin are especially liable to produce irritation of the bladder. The patients in question were employed in the so-called reduction department of the factory where nitro-benzol is converted into aniline, amidotoluol converted into toluidin, and fuchsin produced from those two compounds. In this department, therefore, the workmen run great risks and prophylactic measures should be taken. Free ventilation is essential in order that they may not be exposed to the influence of concentrated vapours of the above substances, they should be instructed to give immediate notice to the medical officers whenever any urinary troubles occur, and men suffering from a disease of the uropoëtic system ought not to be employed in aniline works. Dr. Leichtenstern in conclusion described 2 cases of tumours of the bladder lately observed by him in workmen from a well-known Rhenish chemical factory. The first patient was a man, thirty-one years of age, suffering from symptoms of chronic aniline poisoning—yellow-green colour of the hair and nails together with anæmia. He had also for several weeks complained of anorexia and strangury. By rectal palpation a globular and very painful tumour was recognised in the bladder. The bladder itself was so small that only 70 c.c. (2½ oz.) of fluid could be injected by irrigation. The daily quantity of urine was from 500 c.c. to 750 c.c. (17 fl. oz. to 27 fl. oz.); it was of a dark-green colour and contained a small quantity of blood. Casts were never present and the reaction was acid. In course of time other tumours formed in the bladder and could be felt on both sides of the symphysis, whilst the capacity of the bladder decreased so much that it would hold only 40 c.c. (1½ oz.) of fluid. The treatment consisted of hot poulticing, hot baths, opium suppositories, and subcutaneous injections of morphia, the effect of which was that the patient gradually improved, the capacity of the bladder increased, the urine became normal, and the tumours disappeared. After six weeks the man was able to leave the hospital with only a slight degree of anorexia and strangury. From this rapid recovery it was evident that the growths were not malignant but that they were due to acute submucous proliferating cystitis. The second patient unfortunately died. He was fifty-one years of age, had been employed for many years in the factory and went to the hospital with nearly the same symptoms as those in the preceding case, but the tumours were much larger and were perceptible above the symphysis. Cystoscopy was impossible, for the cavity of the bladder was practically obliterated, and the catheter could not make its way amidst the large tumours. Notwithstanding treatment as above described the growths increased and cystotomy was therefore performed. The bladder appeared to be changed into a great mass of growths and was completely removed, the ureters being brought out into the wound. The patient died two days afterwards. The necropsy showed that the tumours were reticular polymorphous sarcomata and had grown through the submucous tissue. The cause of the disease was evidently a chronic irritation of the bladder caused by the vapour of aniline, its pathogenesis being comparable to that of the sarcoma affecting chimney-sweeps and workers with paraffin.

Dec. 13th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The English-Speaking Practitioner in Italy.

WITH a persistence which will not be thrown away upon the English-speaking part of the profession Dr. Santini in the Chamber of Deputies on Dec. 12th once more interpellated the Government as to whether it intended to take cognisance of what he calls "l'esercizio abusivo sanitario per parte dei stranieri" (the irregular practice of the healing art by non-Italian medical men). He took his stand this time on the "national dignity" which was compromised by the non-recognition of Italian diplomas abroad while foreign diplomas are recognised in Italy. In other words, he wanted to make the possession of an Italian qualification obligatory on the foreign (particularly on the English-speaking) practitioners. The Prime Minister (General Pelloux) reminded him of the circular disseminated some weeks ago among the prefects of the kingdom advising them to take note of such foreign practitioners as courted an Italian *clientèle* and to check such practices wherever found, advising them, moreover, that where such practitioners confined themselves to their compatriots the prefectoral interference was not warranted. Before sitting down His Excellency called Dr. Santini's attention to the fact that there are only 108 foreign medical men practising in Italy, of whom, I may add, the English-speaking contingent may be reckoned by units rather than by tens. Admiral Canevaro (Minister of Marine) asked Dr. Santini if he was aware that the Italian practitioners in foreign countries were more numerous than the foreign practitioners in Italy. So it seems that the reciprocity Dr. Santini desiderates already exists and is of so one-sided a character that it is distinctly to the advantage of his compatriots. Dr. Santini in truth seems to have been as far from "scoring" on this as on any previous occasion of the kind.

The Spread of Pestis Bubonica.

The Italian Government, in view of disquieting information from the Madras Presidency and from the island of Madagascar, has, by an ordinance bearing date Dec. 4th, put in force against all vessels sailing to Italy from those parts the regulations embodied in the law on maritime sanitation of May 8th and July 15th, 1897.

Dec. 13th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Inoculation for "Cattle Tick Fever."

DR. TIDSWELL, the assistant medical officer to the Government of New South Wales, has for the last three months been investigating the effects of protective inoculation of cattle against the cattle tick fever. He has just furnished the Minister of Agriculture with a preliminary report in which he gives a minute description of the disease and the results of his experiments. He observes that these are defective in point of numbers and the time given to the investigation has been too short for the settlement of many of the problems to be elucidated, but sufficient has been done to warrant the following conclusions being accepted as a closely approximate indication of what may be expected from protective inoculation: (1) the inoculation will protect cattle against the serious effects of "cattle tick fever"; (2) provided the animal whose blood is to be used be properly selected the inoculation will not seriously interfere with the milk yield of dairy cows; and (3) in certain cases the inoculation will produce an unhealthy condition which may last for a few months

at least and during which the meat will be of an inferior quality. He adds: "The experiments have shown that protective inoculation has its defects as well as its advantages; it is well for those who may practice it to know the exact conditions and be prepared for some disappointments. At the worst estimate it is better than the natural tick fever and it is the best known means of minimising the disastrous effects of the latter disease. What is required is some method of securing immunity which does not involve infection."

Legislation for Inebriates.

On Oct. 13th Mr. Creed moved the second reading of the Inebriates Bill in the Legislative Council of New South Wales. Eleven years ago a committee had reported as to the necessity for legislation of the kind proposed and further experience only accentuated that necessity and the Comptroller-General of Prisons had pressed upon the Government the necessity of treating habitual drunkards as victims of disease and not as ordinary offenders against law. He thought provisions had been made in the Bill to guard against abuse. The first clause authorised a judge of the supreme court or district court, the master in lunacy, or any stipendiary or police magistrate on the application of the inebriate or any person authorised in writing in that behalf by an inebriate, while sober, to make an order placing the inebriate under the care and control of some person or persons, in the house of the inebriate or of a friend, or in a public or private hospital, or in some gaol or receiving-house, for any period not exceeding twenty-eight days, or in some hospital for the insane or licensed inebriate institution for such period not exceeding twelve months, as might be mentioned in the order. The inebriate might also be placed for a period not exceeding twelve months under the care or charge of an attendant or attendants to be named in the order. As to the orders the Bill provided that they might be applied for by the husband, wife, parent, brother, sister, son, or daughter of full age, or partner in business of an inebriate, or an officer of police of or above the rank of a sub-inspector, acting on the request of a duly qualified medical practitioner in professional attendance on the inebriate, or on the request of the relative of an inebriate or at the instance of a justice of the peace. The clause also allowed the inebriate if mentally fit an opportunity of being heard in objection to the order. The second and third clauses provided that the judge or magistrate might make an order as to the property and treatment of the inebriate. The next clause provided that the order should authorise the attendant to prevent the supply of intoxicants to an inebriate and provision was also made that the inebriate should not leave the colony during the existence of the order unless permitted to do so by some variation or amendment of the order. There were provisions in the Bill which to a certain extent related to the property of an inebriate and the question of supplying liquor to inebriates. Clause 9 provided that the Governor might license institutions for inebriates and make regulations and that provision would, he thought, be less likely to lead to oppression than if the regulations were embodied in the Bill.

The Milk-supply of Melbourne.

At the last meeting of the Melbourne Medical Association Mr. Millard Johnson, Ph.L., one of the lecturers at the Veterinary College, and formerly an inspector of milk at San Francisco, gave a very interesting lecture, illustrated by limelight views and experiments, on the chemistry and handling of milk. He gave a detailed account of the many processes adopted in America to secure purity of milk and contrasted them with the laxity and culpable carelessness which characterised the production, handling, and distribution of milk in Melbourne and its suburbs. It was shown that under present circumstances it was extremely difficult to prevent decomposition of milk in Melbourne and that these difficulties were much intensified by the restrictions imposed by the Factories Act upon the distribution of milk prohibiting the delivery of milk on two afternoons in the week. An animated discussion followed and it was unanimously decided that the medical societies should take immediate steps to try to alter the existing state of affairs. In consequence delegates from the various societies met and drafted a letter on the subject to the public press and also arranged for a deputation to the Chief Secretary.

The Board of Health and Tuberculosis in Victoria.

The President of the Board of Public Health in Victoria, Dr. D. A. Gresswell, has prepared a circular on the subject of the prevalence of tuberculosis in the colony and its prevention. In the ten years from 1888 to 1897 19,137 persons have died from tuberculosis in Victoria. It is recommended that milk be not taken from milkmen who cannot show a certificate from a veterinary practitioner that the dairy herd is free from disease and from a medical practitioner that the dairying operations are properly conducted. Meat must not be taken from a butcher who cannot give satisfactory evidence that the meat is wholesome and that in slaughtering and dressing scrupulous cleanliness has been observed. No house or room which has been occupied by a tuberculous patient should be taken unless satisfactory evidence be given that it has been thoroughly disinfected. Tuberculosis amongst cattle must be eradicated—a matter which has been shown to be practicable.

The Meat Bill, Victoria.

Three years ago a conference of delegates from the metropolitan municipalities was held to consider the necessity of improving the conditions of the meat-supply of the colony. The chairman of the Board of Public Health submitted a draft of a Bill which served as a basis for discussion. After several conferences a measure has been finally drafted and is now coming before Parliament. The main object aimed at is to secure that stock of all kinds intended for sale as food shall, as far as possible, be slaughtered under proper supervision. The Bill proposes that after the expiration of six months no person shall slaughter or dress carcasses except at a public abattoir or a duly-registered private abattoir. The municipal councils are to appoint meat inspectors who must prove their competence to the satisfaction of the Board of Health. To secure independence these inspectors are to be removable only by the Governor in Council. The inspector is to have power to enter abattoirs at any time and is enjoined to examine all animals intended to be slaughtered and all carcasses after slaughter. Further clauses prohibit the sale of meat unless branded by the inspector as fit for consumption.

The Battle of the Clubs.

In Launceston, Tasmania, seven of the medical men engaged in lodge practice have signed a circular sent to the various friendly societies in that city refusing to continue their attendance unless some reform is made with regard to fees and a wage limit for members. The friendly societies in retaliation threaten to import two medical men to do all the lodge practice at a definite salary and without the right of private practice. The friendly societies in Hobart tried this system some years ago, but it was a failure.

Presentations to the Matron of the Sydney Hospital.

Miss Gould, prior to her resignation of the position of matron of the Sydney Hospital, received a number of presentations. The honorary medical staff gave a piece of plate and the resident staff an afternoon tea-service. The nursing staff presented a travelling-bag and other articles and the executive staff a clock. All the spokesmen for the various departments referred in the highest terms to Miss Gould's services and the harmonious relations existing throughout the hospital. In acknowledging the gifts Miss Gould referred to the fact that the present nursing staff, including her successor, consisted entirely of colonial women trained at the hospital.

Appointments.

At the Prince Alfred Hospital, Sydney, Mr. F. A. Bennet, M.A., M.D., C.M. Aberd., has been appointed honorary physician for diseases of the skin; Mr. G. T. Hankins, M.R.C.S. Eng., honorary surgeon for diseases of the ear, throat, and nose; Mr. Cecil Purser, B.A., M.B., Ch.B., honorary physician; and Mr. E. M. Pain, medical superintendent. At the Melbourne University the council has made the following appointments of examiners for the year 1898-99 in the Medical School: Anatomy, Mr. G. A. Syme, M.B., M.S., F.R.C.S.; Materia Medica, Mr. P. B. Bennie, M.A., M.D.; Therapeutics, Mr. D. A. Gresswell, M.A., M.D. Oxon.; Medicine, Mr. John Williams, M.D. Edin.; Surgery, Mr. Charles Ryan, M.B., Ch.M. Edin.; Obstetrics, Mr. Rothwell Adam, M.B., Ch.M. Edin.; Forensic Medicine, Mr. C. H. Mollison, M.B., B.S.; Pathology, Mr. T. Cherry, M.D., M.S. For the M.D. examinations: Physiology of the Nervous System, Mr. H. Maudsley, M.D., M.R.C.P. Lond.; Mental Pathology, Mr. J. Y. Fishbourne, M.B. Dub., and Mr. J. V. McCreery, L.R.C.S. Irel.

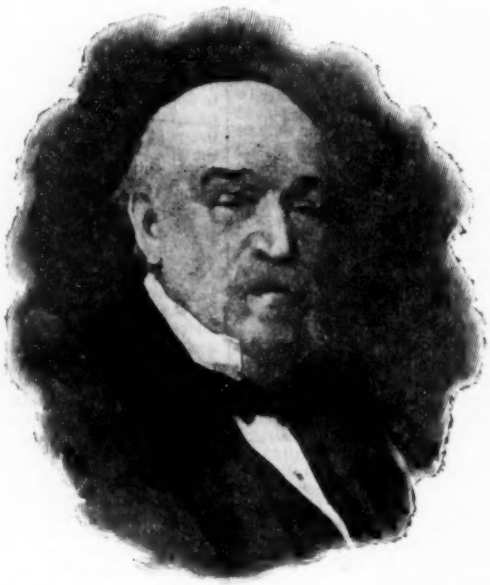
Nov. 2nd.

Obituary.

SIR WILLIAM JENNER, BART., M.D., F.R.C.P. LOND., F.R.S., &c.

EX-PRESIDENT OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON; LATE PHYSICIAN-IN-ORDINARY TO HER MAJESTY THE QUEEN AND H.R.H. THE PRINCE OF WALES; CONSULTING PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL.

WE regret to announce the death of Sir William Jenner which occurred on Dec. 11th, at Greenwood, Bishop's Waltham, Hampshire, a country seat which he had occupied for many years. In him the English medical profession has lost one of its brightest ornaments and foremost representatives, one who had the good fortune to attain to the highest degree of eminence both as a scientific man and a practitioner, and who has now passed away in the fulness of age and universally esteemed. Her Majesty's appreciation of his services to the Royal Family is expressed in the *Court Circular* of Dec. 12th in the following terms:—"The Queen received yesterday with much regret the news of the death of Sir William Jenner who had been Her Majesty's physician for upwards of thirty years and who only retired from the Queen's service in 1893 owing to failing health. He was not only a most able physician but a true and devoted friend of Her Majesty's who deeply mourns his loss."



SIR WILLIAM JENNER, BART., M.D., F.R.C.P. LOND., F.R.S.

William Jenner was born at Chatham in the year 1815, where his father, Mr. John Jenner, resided at the time, although his usual home was at St. Margaret's, Rochester. Of Jenner's early life we know but little, but it seems probable that he received his schooling at the old dockyard town, whither in 1816 Charles Dickens, then a weakly child of four years, had lately come with his parents from Portsmouth. Dickens is described as having loved to watch the games of other boys in which sports his puny physique prohibited his taking part, and it is not too vain an imagining to picture him envying the activity and prowess of the sturdy lad, William Jenner. Jenner's further education was pursued at the University of London (now University College), then in its infancy, his natural bent towards science as a calling there showing itself, and at the age of sixteen years he became apprenticed to an apothecary who conducted a general practice in Marylebone. Having become qualified as a licentiate of the Society of Apothecaries in 1837 he immediately started practice on his own account in Marylebone and with some success. His work was the miscellaneous labour of a middle-class London general practice, but his habits being studious and his energy and ambition well-nigh unlimited it was not long before he aspired to a wider field of effort. For some two years he had been surgeon-accoucheur to the Royal Maternity Charity, when in 1844 he graduated as Doctor of Medicine at the University of London and relinquished general practice. For the next four years he devoted his attention chiefly to the study of pathology at University College where Sir Robert Carswell was lecturing, and in 1848 began, as a Member, his long and distinguished connexion with the Royal College of Physicians of London. At the same time he received the appointment of professorship of Pathological Anatomy at University College and was elected assistant physician to University College Hospital. His active connexion with both these bodies was continued until within a few years of his death, when a dangerous illness caused him to retire from his labours to enjoy a well-earned period of repose.

His connexion with the Royal College of Physicians, commencing, as has been said above, by his becoming a Member in 1848, was as notable as it was long. In 1852 he was elected a Fellow and in the same year he had the honour of delivering the Goulstonian Lectures before the College. In 1881 he was elected to the distinguished position of President, which office he held for seven years—the longest period during which it had been occupied by any physician since the days of Dr. John Ayrton Paris, who presided for thirteen years—from 1844 until 1857. On Sir William Jenner's retirement in 1888 his active part in the management of the affairs of the College ceased, although his influence has since that date been often manifested. As a President he perhaps distinguished himself more than in any of the other numerous honourable capacities in which it was his lot to figure. He worthily upheld the dignity and traditions of the chair occupied by Linacre and Harvey and, with a combination of modesty and thorough commonsense which were ever his notable characteristics, he directed the conduct of the great body of which he was the head during times when the medical profession was undergoing many changes and was decidedly in an unrestful condition.

The Hospital for Sick Children was established in 1852 in Great Ormond-street and Jenner was appointed as its first physician. This appointment he held for ten years, during the greater part of which time Russell Reynolds was his junior colleague. Here it was that Dr. Jenner acquired that intimate knowledge of the pathology and treatment of diphtheria for which his name will long be famous, a subject with regard to which his published works are still reckoned masterpieces of clinical research.

His connexion with the London Fever Hospital began in 1853 when he was elected assistant-physician, and continued until his appointment as Physician-Extraordinary to the Queen in 1861. His appointment at the Fever Hospital accorded well with his other work at Great Ormond-street and at University College Hospital, and although the duties and responsibilities of these three active positions would have been little short of overwhelming to a man of less vigorous determination, Jenner contrived not only to do his share of the work with apparent ease, but at the same time was not forgetful of his social duties.

His "full" physicianship of University College Hospital was announced in 1854, so that between that time and 1861 his days must indeed have been more than sufficiently

occupied by official duties, putting aside the considerable private practice which his success had brought him. At University College Hospital in the "fifties"—an institution and period with which the name of William Jenner will always be preeminently associated—among his colleagues were Dr. Walshe, Dr. Russell Reynolds, Dr. Garrod, Mr. Erichsen, Mr. Quain, and Mr. Henry Thompson. Of these, four subsequently received titular distinction.

As physician to University College Hospital and as Professor of the Principles and Practice of Medicine at University College he earned from all who had the privilege of being either his patients or pupils, a regard amounting even to reverence. His style of lecturing was essentially logical, without embellishment, so that in his teachings all that he said was worth hearing not only as a pleasure but as a really valuable help to students in acquiring a knowledge of their profession—a virtue not too often to be found in lectures which are unfortunately so commonly relegated to the category of "necessary functions," dissertations to be listened to or not according to the mood of the hearer for the sole purpose of "getting signed up." Jenner's lectures were certainly not of this latter kind. They commanded the attention of the listeners by the lucid and interesting manner in which their component facts were presented. He was essentially a lecturer who dealt with facts and with facts verified by his own diverse experience. He was in all matters concerning his art an agnostic in the true sense of the word, if we may use an expression so liable to misconstruction—that is, he never asserted anything as a fact until he in his own ripe experience had proved it to be true or had gathered from an absolutely trustworthy source that it was capable of entire verification. His straightforward manner of presenting his ideas in an accurate—nay, almost tabular—sequence can be well compared to the statistical method of his old friend and colleague Dr. Walter Hayle Walshe, to whose friendship and advice many of the great leaders of our profession have owed so much. A veritable galaxy of brilliant men at this period—an era indeed in the history of the science of medicine—formed the staff of University College Hospital—Sharpey, Walshe, Parkes, Jenner, Russell Reynolds, and Garrod, and on the surgical side Richard Quain, Erichsen, Marshall, and Henry Thompson were doing their best work. To the friendship of, and to association with, these men, though several of them were considerably his juniors, Sir William Jenner owed much, not only in the matter of technical assistance, but of brotherly sympathy, for it can safely be said that no man who has ever had the privilege of personal association with Sir William Jenner can fail to regard with affectionate reverence not only his professional greatness but his private and personal worth.

It must be nearly thirty years since Sir William Jenner ceased to take an active part in clinical teaching, so that even his latest pupils are now past middle age, whilst many of the earlier ones have preceded their master to the grave. But to those who do survive the news of his death will recall to their minds his unique personality and the impressive lessons which he imparted to them. Many a maxim which he uttered by the bedside has been treasured by his hearers and has stood them in good stead in times of difficulty. For nothing seemed to escape his observation; and that no sign was too trivial, no detail too slight, to be discarded by the real physician was the gist of his teaching to his assistants. It was an education in itself to be Jenner's house-physician or clinical clerk, for he demanded precision and exactitude and did not hesitate to severely criticise the style and substance of the notes as they were read out to him on his rounds. Nothing slipshod or slovenly was possible in Jenner's wards. It was scarcely possible, however, to please him absolutely and he seemed to instinctively pounce upon the trifle which had been neglected. His remarks were often so direct and so matter-of-fact that in the circumstances under which they were made they appeared to be humorous though whether the utterer intended that this should so appear was often doubtful. These criticisms, freely passed upon house physician, clinical clerk, and nurses alike, formed most instructive and valuable teaching to all concerned and when Jenner perceived that his subordinate received them sensibly and good-naturedly the fact would very generally form the foundation of a friendship which might have an educational and professional value scarcely to be over-estimated. He knew how to teach and what to teach, and he spoke with fearless dogmatism and in an emphatic, terse manner which carried conviction. As an illustration of this and also of his prompt sagacity we repeat the following anecdote upon the evidence of a friend of the late physician who was present. One day Jenner was enlarging upon a possible case of typhoid fever and dwelling upon the differential diagnosis between it and other diseases when he mentioned a sign (we forget what) which, he said, "you never get in typhoid." Upon its being suggested that he spoke too peremptorily on the point, he turned on the speaker and asked, "How often have you seen it in the course of your life? Possibly in one per cent. of the whole number of cases treated? Well, sir, if I succeed in making my pupils 99 times right out of 100 I've done very well."

He never neglected the sanitary side of medicine and always taught his pupils that to prevent was of more importance than to cure. In sanitary matters as in medicine he always made for the essentials, and once when a question of ventilation was being discussed and the value of different methods being canvassed Jenner merely listened to the *pros* and *cons* and then, when everybody had finished, contented himself by saying, "If you want to ventilate the place efficiently you must have the holes big enough." This is a fair sample of his methods and it was marvellous to hear him at a society after listening to the last fine-spun notion upon this or that quietly rise and say a few emphatic sentences which put the whole matter in a nutshell. There was nothing foggy in his mind. He never spoke merely for the sake of speaking and after he had spoken there was no mistaking what he meant or what his line of action would be. When he had made up his mind as to the course of action to be pursued he was not to be turned aside. Sometimes he showed himself scarcely amenable to argument and if pressed was not seldom restive but his opposition was always honest, sincere, and straightforward. It can be believed that University College men were thoroughly proud of their great master. Every medical student of the College felt something akin to reverent awe in his presence. "We were all proud of him," writes one who from his pupil became his colleague and friend; "nay, we worshipped him, although he may not have known it. The pressure of private practice gradually led to his hospital visits being curtailed in number and duration, whilst the clinical lectures which were so full of instruction and wisdom had to be abandoned, and at last the time came when he ceased to visit the hospital at all. Still opportunities did occur in the Pathological and Clinical Societies during his presidency of these bodies, as well as in other medical gatherings, for us to be again under the master's spell, as in his old familiar aphoristic style he spoke of tubercle or cancer or rickets or typhoid fever to an older generation, it is true, but still to those who sat at his feet. But those occasions were few and far between. The world claimed him, and while he filled so well the presidential chair at the Royal College of Physicians the demands on his time left him no leisure to appear at scientific meetings—a veritable loss to the attendants."

On the death of Dr. Baly in 1861 Dr. Jenner was appointed Physician-Extraordinary to Her Majesty the Queen, and in the following year he was gazetted as Physician-in-Ordinary which honourable position he held until 1893, when his health compelled him to resign. From 1863 he likewise acted in the same capacity to the Prince of Wales, and in 1864 he was elected a Fellow of the Royal Society. He assiduously attended the Prince Consort in his last illness — that sad event which deprived the English people of one who had endeared himself to all. In 1868 Her Majesty conferred on Dr. Jenner the honour of a Baronetcy of the United Kingdom, a distinction which was hailed by the whole profession as an honour to the medical calling as well as a well-deserved reward of conscientious and unremitting labour. A very large number of his friends and pupils met together on June 11th, 1868, to celebrate the honour thus conferred. Dr. Parkes took the chair and the dinner which was served at Willis's rooms was a notable event of the medical year. The honour of a baronetcy had been earned by sheer hard work, untiring energy, unblemished honesty and scientific attainments, and in that it rested on no basis of political expediency or private feeling this tribute to the art of medicine was doubly grateful. Jenner was in the prime of life and in the zenith of his success, so that in the speeches delivered on this happy occasion there was no need for panegyrics on his past work. His life's labour was fresh in the minds of all. His contributions to science were part and parcel of the

medical knowledge of the day, and among those who were present at the dinner—probably one of the most important meetings of members of the profession for convivial purposes ever held—were an almost unprecedented number of men who owed their success and position to the teachings of the man in whose honour the entertainment was given. Some 200 friends, colleagues, and pupils sat down, including *alumni* of University College drawn from all parts of the United Kingdom. An illuminated address of congratulation was presented to Sir William Jenner by G. V. Poore, on behalf of the students and the health of the new baronet was proposed in the most fitting terms by Dr. Edmund Parkes, when the enthusiastic admiration of a friend was combined with the dignified periods of an orator. Other toasts were given and replied to by Dr. Sharpey, Mr. Richard Quain, and Mr. Malden.

The Prince of Wales's dangerous illness occurred in 1871 and in 1872 Sir William Jenner, who had been in attendance on His Royal Highness during that long and most anxious period and was in great measure instrumental in bringing about the happy issue, was gazetted as a Knight Companion of the Bath. On May 24th, 1889, on his retirement from active work, Her Majesty promoted him to be a Grand Commander of that distinguished Order.

Towards the end of the year 1888 Sir William Jenner became seriously ill and for several weeks his condition was most critical. On Jan. 5th, 1889, however, THE LANCET had the gratification of announcing that during the past week he had steadily improved and it was hoped that he would soon be able to leave London for the country which he was strong enough to do at the end of the month. Throughout his illness he was attended with the closest assiduity by his attached friend and colleague Dr. Russell Reynolds. His health, however, and his age—he had passed the limit assigned by the Psalmist—three score and ten—as well as the advice of his friends, induced him to take a well-earned rest and no further to tax the powers of a physique reduced by his recent illness. He therefore retired from the active pursuit of his profession. But when his years and failing health confined him to his charming country seat he loved to recall the memories of his early struggles, his daily and arduous labours in the wards and post-mortem rooms of the Fever and Small-pox Hospitals, where he worked with an enthusiasm undaunted by the tax it made on his health and comfort. Twice he was attacked by typhus fever and once narrowly escaped with his life. But he was laying then the foundations of his future fame and the same qualities that made him persevere in his researches then were just those which he afterwards carried into every sphere of his labour.

Sir William Jenner's literary works are more notable by their entire originality of thought and great value to the profession than for their bulk and quantity. The most striking points in the studies and experiences of a long life he has recorded, but he has left in the less permanent form of papers to societies and journals much which will be very acceptable to the profession at large for many years to come. His treatise on Diphtheria was published in 1861 and it presented to the profession many observations and details which had previously not received their due meed of attention. Previously to this his Goulstonian lectures had met with recognition as the result of earnest and careful labour as well as expressions of long and useful experience. The memoirs which will always be pre-eminently associated with his name are, "The Identity or Non-identity of Typhus and Typhoid Fevers," "Diseases Commonly Confounded under the term Continued Fevers," and "Acute Specific Diseases"; of these, the first especially aroused marked interest among the leaders of medical science. His opportunities for observing the line of demarcation between these previously confused maladies were exceptional, and he made use of them in a way that few men could have done, but his writings on this subject evoked no little controversy as to priority of discovery—a question which this is not the place to discuss; it will be sufficient to refer to the obituary of Dr. Alexander Patrick Stewart of the Middlesex Hospital, published in THE LANCET of July 28th, 1883. No detail was too trivial to attract Jenner's attention and no symptom went unnoticed or unrecorded. To Holmes's "System of Surgery," Reynolds's "System of Medicine," and Quain's "Dictionary of Medicine" he contributed articles of the highest importance, which indeed rank among the best sections of those admirable works. In 1893 he republished in one volume his "Lectures and Essays on Fevers and Diphtheria, 1849–1879." This volume contains perhaps the best of Jenner's work. In it are included his essays on Typhus, Typhoid Fever, and Diphtheria, to which reference has already been made, and several other valuable contributions which had previously been printed among the Transactions of the Royal Medical and Chirurgical Society. "Clinical Lectures and Essays on Rickets, Tuberculosis, Abdominal Tumours, and Other Subjects," was a considerable volume published in 1895. Included in this volume are the two courses of masterly lectures on Rickets which he delivered at the Hospital for Sick Children in Great Ormond-street, and although more than a generation has passed since their delivery they are still full of instruction, for they were the product of a keenly observant mind and are stamped with the individuality of their distinguished and lamented author. With regard to rickets to Sir William Jenner must be accorded the great merit of seeing the truth that this disease is, as he put it, "no more of a disease of the bones than is typhoid fever a disease of the intestines." He established it as one of the four diatheses to which infantile life is prone and at the outset of his lectures clearly contrasted the features of these four—tuberculosis, scrofulosis, rickets, and syphilis. His observations concerning the habits of children in later pages are a veritable masterpiece of word painting.

The last of his communications to our pages was entitled "A Brief Analysis of the Appearances observed in the Bodies of Seventeen Persons 'Burnt to Death.'" It was dated from Bishop's Waltham, was upwards of seven columns in length, and appeared in THE LANCET of August 22nd, 1891. In it he introduces the reminiscence—naturally of much interest to us—that the Founder of THE LANCET (at that time coroner for West Middlesex) was the means of enabling him "to examine the bodies of three people destroyed in a public-house burnt down in Great Portland-street."

Sir William Jenner was honoured with, in addition to the many degrees and titles already mentioned, the degrees of Doctor of Laws of Cambridge University and Edinburgh University, and in 1863 had conferred upon him the honorary degree of Doctor of Civil Law by the University of Oxford. He was also a Commander of the Order of Leopold of Belgium, an honorary member of the Academy of Belgium, and Fellow or Member of a very large number of learned societies in many of which he has held office as president and vice-president.

Sir William Jenner was married in 1858 to Adele Lucy, daughter of the late Mr. Stephen Adey, of Gloucester-place, Portman-square, who survives him.

He is succeeded in the baronetcy by his eldest son, Captain Walter Kentish William Jenner, of the 9th Lancers; of the four younger sons two are in the army, one is in the Consular service, and one is in his father's profession.

The funeral took place this (Friday) morning.

ERNEST DENMAN MINTER, M.B. LOND., M.R.C.S. ENG., L.R.C.P. EDIN., R.N.

STAFF SURGEON ERNEST DENMAN MINTER, R.N., died at the Royal Naval Hospital, Stonehouse, on Dec. 9th, after a short illness. He was the youngest son of the late Dr. J. M. Minter, inspector-general of hospitals and fleets, honorary physician to the Queen, and surgeon-extraordinary to H.R.H. the Prince of Wales. The deceased received his medical education at Guy's Hosptal, London, and graduated M.B. Lond. in 1884; he also took the qualification of M.R.C.S. Eng. and L.R.C.P. Edin. the same year. Dr. Minter entered the Royal Navy as a surgeon in February, 1885, and was promoted to the rank of staff surgeon in February, 1897. He was appointed to the *Rupert*, the port guardship at Gibraltar, in December, 1895, and only quite recently returned to England owing to the state of his health.

ROYAL METEOROLOGICAL SOCIETY.—We are informed by Mr. William Marriott, assistant secretary to the society, that on Jan. 2nd, 1899, the offices of the society will be removed from 22, Great George-street, Westminster, to Princes Mansions, 70, Victoria-street, Westminster, S.W., to which address all communications on and after that date should be forwarded.

Medical News.

UNIVERSITY OF CAMBRIDGE.—On Dec. 8th Edward Sydney St. Barbe Sladen, M.B., B.C., of Gonville and Caius College, was admitted to the degree of M.D.; H. Williamson, B.A., of St. John's, and H. B. Roderick, B.A., of Emmanuel, were admitted to the degrees of M.B. and B.C.; and Dr. G. N. Pitt has been appointed an additional examiner in Medicine for the M.B. degree.

FREEMASONRY.—*The Rahere Lodge, No. 2546.*—A meeting of the Rahere Lodge was held at Frascati's Restaurant on Dec. 13th, Bro. T. G. A. Burns, W.M., being in the chair. A vote of condolence with the family of the late Earl of Lathom was passed unanimously, Lord Lathom having been an honorary member of the lodge. Bros. Marshall, Heath, Burrows, and Brewerton were admitted to the third degree; Bros. Coventon, Griffiths, Gay, and Tucker were admitted to the second degree; and Dr. C. H. Roberts was initiated into freemasonry. The deputy master for the time being of the Sancta Maria Lodge, No. 2682, was elected an honorary member of the lodge and 20 guineas were voted from the lodge funds in aid of the Royal Medical Benevolent College at Epsom. The members and their guests afterwards dined together.

LEWISHAM UNION INFIRMARY.—Since the opening of this infirmary in 1894 there have been 768 patients of unsound mind under treatment, and a separate building containing three wards and two padded rooms has been erected for the reception and temporary accommodation of such cases. On the occasion of the opening of this building Dr. F. S. Toogood, the medical superintendent of the infirmary, said that it did not inaugurate any new policy because recent Lunacy Acts have made provision for the temporary care of mental cases by giving a justice of peace or magistrate power to order their detention for a short period in a workhouse or infirmary. As showing the connexion between mental and bodily disorder Dr. Toogood said that an elderly female who was admitted suffering from melancholia with suicidal tendencies was found to have a large abdominal tumour, which he removed, and the patient thereupon made so good a recovery that she returned home sound in mind and body and has remained so. Continuing his address Dr. Toogood said: "I feel a certain amount of modesty in speaking of the medical staff and of the treatment of mental cases. The specialist who confines his attention solely to, and whose horizon is bounded entirely by, lunacy is the very worst man to have the care of mental cases in their early stages. What is wanted is great general experience, both medical, surgical, and mental, and I must firmly insist that the medical officers of large institutions such as this are the very men who pre-eminently possess these qualifications. In addition to this they have but a few mental patients under their care at any one time and so are enabled to thoroughly investigate each case. The magistrates and guardians have power to call in any assistance they may deem requisite. Our attendants are trained nurses, male and female, and I have the utmost confidence in them. Dr. Rayner recently delivered a lecture under the auspices of the Charity Organisation Society in which he advocated the formation of 5 or 6 reception houses in the metropolis, these being designed to replace buildings such as this. A similar proposal has also been formulated by the Asylums Committee of the London County Council. The objections to these schemes are many:—1. The total absence of any reason for the change; the present method works well and there have been no complaints of any kind. 2. The great expense; 1000 beds at least would be needed and even the London County Council would find it difficult to erect five buildings of 200 beds each for less than £250 per bed; that means £250,000 for bricks and mortar besides furniture and a host of officers. 3. The impossibility of the medical officers becoming thoroughly acquainted with the cases when dealing with so large a number in such a limited time. 4. The hardship of dragging the patients' friends half across London to attend magisterial examinations. 5. The stigma of lunacy, for by whatever fancy names the reception houses may be called they will inevitably be lunatic asylums to the general public and a working man or woman branded as a lunatic has little chance of obtaining employment in these days of keen competition. After everything has been said systems must be judged by their results and a method such as ours which absolutely cures over half its cases in a fortnight and which only sends one-third to the dreaded lunatic asylum must, to use a colloquial phrase, 'take a lot of beating.'"

MR. J. J. MACKAY, of 154A, Wandsworth-road, has been arrested for perjury on the order of Mr. A. Braxton Hicks, the alleged offence having been committed at the Battersea coroner's court in the course of giving medical evidence at an inquest. He has been released on bail.

INCREASE OF SALARY.—At the meeting of the Bristol Health Committee held on Dec. 6th it was decided to recommend the Town Council to increase the salary of Dr. D. S. Davies, the medical officer of health, by £50 in 1899, and a further sum of £50 in 1900.

MR. W. G. GRACE.—Under the presidency of the Duke of Beaufort a farewell dinner organised by members of the Clifton Beagles and attended by a representative gathering of gentlemen interested in various branches of sport was given to Mr. W. G. Grace, M.R.C.S. Eng., L.R.C.P. Edin., on the occasion of his departure from Bristol.

SOUTH SHIELDS MEDICAL PRACTITIONERS' ASSOCIATION.—At a meeting of this association held on Dec. 8th a resolution was adopted supporting the memorial signed by 309 registered practitioners and laymen and recently presented by the Corporate and Medical Reform Association, Limited, to the General Medical Council against "illegal certificates of proficiency in departments of medicine, surgery, or midwifery." The resolution also thanks the Direct Representatives on the Council and Sir Christopher Nixon, Dr. Bennett, and Mr. Tichborne for their support in the Council of the motion moved by Mr. Brown and seconded by Mr. Horsley—

That a special committee be appointed to consider and report at the next session of the Council all cases of alleged infringement of the Medical Acts by persons who profess to examine candidates in medicine, surgery, or allied subjects and to grant certificates or diplomas testifying as to proficiency in any branch of medical or surgical science.

Resolutions to the same effect have since been adopted by the East Suburban Medical, Ethical, and Medical Protection Society, Limited, and the Beckenham and Penge Medical Society.

THE VICTORIA HOSPITAL FOR CHILDREN.—By permission of the Duke of Westminster a meeting in support of the scheme for erecting a new building for the Victoria Hospital for Children, Chelsea, was held at Grosvenor House on Dec. 12th. It is estimated that the cost of the new building will be £25,000. It is proposed that there shall be 6 self-contained wards on three floors, each with 16 beds. Ample accommodation for isolation of suspicious and infectious cases is to be provided. The operation and anæsthetic rooms are to be on the level of the first floor and the arrangements in the basement are to include a better dining-room for the nurses and store rooms. The Duke of Westminster occupied the chair and was supported by Princess Louise and the Marquis of Lorne. The Chairman explained that the Victoria Hospital was at present housed in a building which was never intended for a hospital. The new hospital would be devoted exclusively to the reception of suffering children, while the present building would be utilised for the purposes of the staff. Mr. Pickering Pick dwelt on the continually increasing demands upon the hospital and said that thirty-three years ago when the hospital was opened there were 39 in-patients and 5147 out-patients, while last year there were nearly 900 in-patients with the same accommodation as in the first year and over 56,000 out-patients. Canon Fleming, in supporting the appeal, said he hoped that the day was far distant when the voluntary system of hospital support would be superseded by State-aid. The Duke of Westminster said the continued growth of the population in London must give them all great anxiety on the score of hospital accommodation. Whether voluntary effort would be sufficient to cope with their requirements in this respect he did not know but he hoped it would. The Marquis of Lorne desired to join with Canon Fleming in the hope that the day was far distant when their hospitals would be supported out of the rates. If the hospitals were rate-aided they would find that those institutions would be called upon

to support very many who ought not properly to be supported in them. This was largely the case in British North America.

THE NEW HOSPITAL AT NEWTON ABBOT, DEVONSHIRE.—The old cottage hospital at Newton Abbot being inadequate the late Mrs. Emmeline Fisher gave the munificent sum of £5000 towards the erection of a new building and to perpetuate the memory of her husband, Mr. Edward Fisher of Abbotsbury. Mrs. Fisher also bequeathed a further sum of £2000. The building which was recently opened stands upon a site which is about a quarter of an acre in extent and is situated on elevated ground. The hospital is about 200 ft. in length and 28 ft. in width exclusive of offices. The administrative block is situated in the centre of the building. On the first floor there are 4 bedrooms, nurses' sitting room, &c., and the attic contains 3 bedrooms. There are verandahs on which patients can sit in fine weather. The west wing has a large ward with twelve beds, 48 ft. by 24 ft., a nurses' room, &c., with a board room and convalescent room. The east wing has similar accommodation with the addition of an operating room, with the medical officers' room adjoining. Within the entrance doorway on the right hand side has been placed a marble slab bearing the following inscription: "In commemoration of the Diamond Jubilee of Her Majesty Victoria, Queen and Empress, and in gratitude for the blessings enjoyed under her reign, the people of Newton Abbot, Highweek, and neighbourhood have endowed this Hospital with £1044, to be called the Queen Victoria Fund." On the left-hand side on a stone slab are the words: "This Hospital was erected by Mrs. Emmeline Fisher in memory of Edward Fisher of Abbotsbury."

PRESENTATIONS TO MEDICAL MEN.—At the Townhall, South Bank, Yorks, on Nov. 17th, Mr. John Steele, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., a well-known medical practitioner in the town, was presented by friends and well-wishers in the neighbourhood with a testimonial consisting of a gold English lever watch and chain.—On Dec. 2nd, at the Bradford Infirmary, Mr. H. C. Major, M.D. Edin., who is retiring from the post of honorary physician at that institution, was presented by the Mayor of the city with an illuminated address in recognition of his services for many years.—Mr. A. J. Pollard, L.R.C.S., L.R.C.P. Edin., L.F.P.S. Glasg., of Armley, has been presented with a silver cigarette case in recognition of his services as instructor on First Aid to the Injured by the members of the Holbeck Division of the St. John Ambulance Association, North-Eastern Railway Company, Leeds.—On Dec. 1st, at the Bristol Council Chamber, the Mayor (Sir R. Symes), in the presence of a number of ladies and gentlemen, presented Mr. and Mrs. Richardson Cross with a silver cradle in recognition of the fact that a daughter had been born to them during the term of Mr. Cross's office of High Sheriff of Bristol. The cradle was engraved with the city arms and also those of the recipient. Accompanying it was a silver kettle.—At the annual meeting of the Swindon branch of the St. John Ambulance Association, after the distribution of certificates and medallions, the president, on behalf of the class, presented Mr. G. Rodway Swinhoe, L.R.C.P. Lond., M.R.C.S. Eng., with a liqueur case in appreciation of his services as honorary lecturer.—Last week Mr. Alan Eskrigge Carruthers, M.A., M.B., B.C. Cantab., &c., of Batheaston, Bath, was presented with a clock subscribed for by 50 parishioners as a mark of esteem on the occasion of his marriage.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

BERKELEY, COMYNS, M.B., B.C. Cantab., M.R.C.P., has been appointed Physician Accoucheur for the Western General Dispensary, Marylebone-road, London.

BRICKWELL, J., M.R.C.S., has been re-appointed a Medical Officer for the Stoke Pogis Sanitary District of the Eton Union.

COLLINS, J. A., M.D. Lond., L.R.C.P., M.R.C.S., has been appointed a Medical Officer for the Castor Sanitary District of the Peterborough Union.

CULMER, JOHN J., M.R.C.S., L.R.C.P. Lond., has been appointed an Assistant Surgeon for the New Providence Asylum at Nassau, Bahamas.

DIBBS, W. S., L.R.C.P. Lond., M.R.C.S., has been re-appointed a Medical Officer for the Farnham Royal Sanitary District of the Eton Union.

DOBSON, J. F., M.B. Lond., has been appointed Resident Casualty Officer for the General Infirmary, Leeds.

FENWICK, S. C. C., L.R.C.P. Lond., M.R.C.S., has been appointed a Medical Officer for the No. 10 Sanitary District of the Parish of St. Mary, Lambeth.

FERGUS, J., L.R.C.P., L.R.C.S. Edin., has been appointed a Medical Officer for the Appleton Wiske Sanitary District of the Northallerton Union.

GAMAN, F. R. S., L.R.C.P. Lond., M.R.C.S., has been appointed a Medical Officer of Health by the Caistor Rural District Council.

GERMAN, A. W., L.R.C.P. Lond., M.R.C.S., has been appointed a Medical Officer for the First Sanitary District of the West Derby Union.

GOUGH, H. E., L.R.C.P. Lond.. M.R.C.S., has been appointed a District Medical Officer by the Northwich Rural Council.

GRAHAM, W., M.B., Ch.M. Glasg., has been appointed an Assistant Medical Officer for the Walton Workhouse of the West Derby Union.

GRIFFITHS, J. C., B.Sc. Lond., M.B., L.R.C.P., M.R.C.S., has been appointed a Medical Officer for the Tealby Sanitary District of the Caistor Union.

HILLS, W. C. D., L.R.C.P. Lond., M.R.C.S., has been appointed a Medical Officer for the Twelfth Sanitary District of the Wisbech Union.

LISTER, W. T., B.A., M.B., B.C., F.R.C.S., has been appointed an Assistant Surgeon to the Central London Ophthalmic Hospital, Gray's-inn-road, W.C.

O'GORMAN, M. C., L.R.C.P., L.R.C.S. Irel., has been appointed a Medical Officer for the Arklow District.

PEET, HENRY, M.B. Lond., has been appointed Resident Medical Officer for the Brownlow Hill Workhouse Infirmary, Liverpool.

ROBERTS, E. A., M.D. Lond., L.R.C.P., M.R.C.S., has been appointed Medical Officer of Health for District No. 20, which includes the Parish of Clapham and a portion of Lambeth.

RUSSELL, J. RISIEN, M.D., F.R.C.P. Lond., has been appointed Assistant Physician to the National Hospital for the Paralysed and Epileptic (Albany Memorial), Queen-square, Bloomsbury, London, vice W. S. Colman, resigned.

SHARPE, C. H., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed a Medical Officer for the Second Oldbury Sanitary District of the West Bromwich Union.

SIMPSON, G. W., L.R.C.P. Lond., M.R.C.S., has been appointed a Medical Officer for the Lamberhurst Sanitary District of the Ticehurst Union.

SOUTHEY, A. J., M.R.C.S., has been re-appointed a Medical Officer by the Eton Guardians and Rural District Council.

STEWART, J. PURVES, M.A., M.D., M.R.C.P., has been appointed an Assistant Physician to the Westminster Hospital, S.W.

STURROCK, A. C., M.B., C.M. Edin.. has been appointed a House Surgeon for the Grimsby and District Hospital, vice H. S. Beadles, resigned.

SUTTON, W. L., has been appointed an Analyst for the Borough of Bury St. Edmunds.

TUNNICLIFFE, F. W., M.D., M.R.C.P., has been appointed an Assistant Physician for Out-patients to the Victoria Hospital for Children, Chelsea.

WALKER, D. E., M.B., C.M. Edin., has been appointed a Medical Officer for the Second Sanitary District of the Brixworth Union.

Vacancies.

For further Information regarding each vacancy reference should be made to the advertisement (see Index).

ANCOATS HOSPITAL, Manchester.—Resident House Surgeon. Salary £50, with board and washing.

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN, Birmingham.—Resident Surgical Officer. Salary £50, with board, washing, and attendance at the institution.

BOROUGH OF WEYMOUTH AND MELCOMBE REGIS, Dorset.—Analyst. Salary £20 a year. Applications to the Town Clerk, Municipal Offices, Weymouth.

BURY INFIRMARY.—Senior House Surgeon. Salary £100 per annum, with board, residence and attendance.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria park, E.—Resident Medical Officer. Salary £100 per annum, with board, &c.

COUNTY ASYLUM, Rainhill, near Liverpool.—Assistant Medical Officer, unmarried. Salary commences at £100 per annum, with prospect of increase to £250, with furnished apartments, board, attendance, and washing provided.

COUNTY HOSPITAL, Ryde.—House Surgeon. Salary £50 per annum, with board, lodging, &c.

GENERAL INFIRMARY AT GLOUCESTER, AND THE GLOUCESTERSHIRE EYE INSTITUTION.—Assistant House Surgeoncy for six months. Board, residence, and washing provided.

GUEST HOSPITAL, Dudley.—Assistant House Surgeon for six months. Salary at the rate of £40 per annum, with residence, board, and washing.

HORTON INFIRMARY, Banbury.—House Surgeon and Dispenser. Salary £60 per annum, with board and lodging.

HOSPITAL AND DISPENSARY, Newark-upon-Trent.—House Surgeon, unmarried. Salary £80 per annum, with board and lodging in the hospital.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physician.

KINGTON UNION.—Medical Officer for the Kinsham District. Salary £30, with the additional payments authorised by the Order of the Poor-law Commissioners. The appointment is subject to statutory deductions. Applications to the Clerk to the Guardians, Kington, Herefordshire.

LEICESTER INFIRMARY.—Honorary Assistant Physician.

LIVERPOOL NORTHERN HOSPITAL.—Assistant House Surgeon. Salary £70 per annum, with residence and maintenance in the house.

LONDON LOCK HOSPITAL, 91, Dean-street, W.—House Surgeon for the Male Hospital. Salary £50 per annum with board, lodging, and washing. Applications to the Secretary at Harrow-road.

MIDDLESEX HOSPITAL, W.—Bacteriologist to the Hospital and Medical School. Salary £100 and fees for special classes.

NEW HOSPITAL FOR WOMEN, 144, Euston-road, London. — Three Assistant Physicians in the Out-patient Department, for two years.

NORFOLK AND NORWICH HOSPITAL.—Honorary Dental Surgeon.

NORTHERN DIVISION OF SOUTH UIST PARISH.—Medical Officer and Public Vaccinator. Salary £77 10s., and private practice. Applications to Mr. T. Wilson, Solicitor, Lochmaddy, Clerk.

NORTH LONDON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Fitzroy-square, W.—Clinical Assistant for the Central Out-patients' Department, Fitzroy-square, W., for six months. Honorarium at the rate of £35 per annum. Applications to the Secretary, Offices, 41, Fitzroy-square.

PADDINGTON-GREEN CHILDREN'S HOSPITAL, London, W.—Surgeon to Out-patients.

ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY, Wigan.—Junior House Surgeon for twelve months. Salary £80 per year, with apartments and rations, exclusive of wines, spirits, and washing.

ROYAL BUCKINGHAMSHIRE HOSPITAL, Aylesbury.—Resident Surgeon and Apothecary, unmarried. Salary £80 the first year, with an advance of £10 per annum until it amounts to £100, with board, lodging, washing, coals, and lights, and furnished apartments.

ROYAL COLLEGE OF PHYSICIANS, London.—Milroy Lecturer for 1900.

ROYAL HANTS COUNTY HOSPITAL, Winchester.—House Surgeon, unmarried. Salary £75 per annum, with board, residence, &c.

ROYAL SEA-BATHING HOSPITAL, Margate.—Assistant Resident Surgeon. Salary £52 per annum, with board and residence. Applications to the Secretary, R. S. B. Hospital Offices, 30, Charing-cross, London, S.W.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN, Marylebone-road, London, N.W.—Anæsthetist. Honorarium £25 per annum.

ST. SAVIOUR'S UNION, Surrey.—Second Assistant Medical Officer at the Infirmary, East Dulwich-grove, S.E. Salary £80 per annum, with furnished apartments, board, and washing, subject to statutory deductions. Applications to the Clerk, Union Offices, John-street West, Blackfriars-road, S.E.

UNIVERSITY OF EDINBURGH.—An additional Examiner in Zoology.

UNIVERSITY OF GLASGOW.—Assistant Examiners.

WEST BROMWICH DISTRICT HOSPITAL.—House Surgeon, unmarried. Salary £80 per annum, with board, residence, and washing.

WORCESTER COUNTY AND CITY ASYLUM, Powick.—Assistant Medical Officer. Salary commencing at £100 a year, with board, lodging, and washing.

YORK DISPENSARY.—Resident Medical Officer, unmarried. Salary £150 a year, with furnished apartments, coals, and gas.

Births, Marriages, and Deaths.

BIRTHS.

CHEESMAN.—On Dec. 11th, at Shohola, Swanage, Dorset, the wife of Edward R. R. Cheesman, L.S.A., of a daughter.

EWART.—On Dec. 8th, at 58, Queen's Gate-terrace, the wife of Dr. Chas. Ewart, of a son.

HUDSON.—On Dec. 8th, at Vine House, Cobham, Surrey, the wife of Arthur B. Hudson, M.R.C.S., L.R.C.P., of a son.

LANGFORD.—On Dec. 8th, at Weston-park, Crouch-end, N., the wife of C. Harris Langford, M.B. Lond., of a daughter.

MARRIAGES.

DURHAM—MAX GETZ.—On Dec. 15th, at the German Reformed Church, by Pfarrer Ehlers, at Frankfort-on-the-Maine, Frank Rogers Durham, youngest son of the late A. E. Durham, F.R.C.S., to Elisabeth Ottilie, youngest daughter of the late Geheimer Sanitätsrath Dr. Max Getz, of 43, Savignystrasse, Frankfort-on-the Maine.

MICHAEL—HARVEY.—On Dec. 7th, at St. Paul's, Upper Norwood, Cyril Eden Michael, M.A., M.B., B.C., M.R.C.S., L.R.C.P., to Ada Helen, widow of the late Henry N. Harvey, of Hayle, Cornwall.

DEATHS.

MINTER.—On Dec. 9th, at the Royal Naval Hospital, Plymouth, Ernest Denman Minter, Staff Surgeon, R.N., late of H.M.S. *Rupert*.

MYERS.—On Dec. 10th, 1898, at 31, St. Augustine's-road, Camden-square, N.W., Elizabeth Beaufoy Myers, widow of the late Robert Short Myers, Surgeon, whom she survived upwards of 39 years, in the 87th year of her age. No flowers, by request.

ROGERS.—On Dec. 11th, at Old-street, Finsbury, E.C., J. F. Rogers, L.R.C.P. Edin., M.R.C.S., aged 63 years.

WOOD.—On Dec. 7th, at Cranbrook, Kent, Henry Benjamin Wood, M.D., aged 69.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Dec. 15th, 1898.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
Dec. 9	29·63	S.W.	0·10	70	54	45	50	51	Overcast
" 10	30·16	W.	...	69	57	45	49	51	Cloudy
" 11	30·37	W.	...	62	57	51	52	54	Cloudy
" 12	30·27	S.W.	...	61	57	52	51	53	Overcast
" 13	30·35	N.E.	...	51	50	45	44	46	Cloudy
" 14	30·25	S.W.	...	60	54	39	40	42	Cloudy
" 15	30·12	W.	...	60	51	42	43	46	Cloudy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (19th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (9.30 A.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.), London Throat Hospital (2 P.M.).

TUESDAY (20th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat Hospital (2 P.M. and 6 P.M.), Royal Ear Hospital (3 P.M.).

WEDNESDAY (21st).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat Hospital (2 P.M.).

THURSDAY (22nd).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex, (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.).

FRIDAY (23rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.) Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.) London Throat Hospital (2 P.M. and 6 P.M.).

SATURDAY (24th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.), London Throat Hospital (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY (20th). — PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Dr. E. F. Trevelyan: (1) A Cyst on the Third Ventricle; (2) A Cyst on the Fourth Ventricle; (3) An Anomalous Tumour of the Brain.—Dr. H. M. Fletcher: Peculiar Condition of the Colon in Pernicious Anæmia.—Mr. Crosse and Mr. Pakes: Black Water Parasite Alive.—Mr. Pakes and Mr. Howard: The Technique of Blood Films.—Mr. H. B. Robinson: Multilocular Tumour from the Inguinal Canal of a Female.—Dr. C. D. Green: Extensive Sarcoma of Mediastinum. Card Specimens:—Dr. Trevelyan: (1) Renal Tumour; (2) Heart with Extensive Calcification of Mitral Valve; (3) Suppurative Typhoidal Cholecystitis; (4) Foreign Body from Peritoneum.

CHELSEA CLINICAL SOCIETY (Holy Trinity Parish Hall, Pavilion-road, S.W.).—8.30 P.M. Dr. C. C. Gibbes: Early Diagnosis of Mitral Stenosis, with cases.—Mr. J. D. E. Mortimer: A Case of Delirium Tremens treated by Inhalation of Choloform.—Mr. C. A. Morris: Intestinal Obstruction due to Gall-stones.

WEDNESDAY (21st).—ROYAL MICROSCOPICAL SOCIETY (20, Hanover-square, W.).—7.30 P.M. Exhibition of Binocular Microscopes.

ROYAL METEOROLOGICAL SOCIETY (Institution of Civil Engineers, Gt. George-street, Westminster, S.W.).—7.30 P.M. Papers:—Capt. A. Carpenter: The West Indian Hurricane, September, 1898.—Mr. W. H. Dines: The Connexion between the Winter Temperature and the Height of the Barometer in North Western Europe.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

TUESDAY (20th).—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-sq., W.C.).—3.30 P.M. Dr. Colman: Syringomyelia.

WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM (73, Welbeck-street, W.).—4 P.M. Dr. H. Campbell: Cases of Paraplegia and Remarks on Treatment.

THURSDAY (22nd).—LONDON TEMPERANCE HOSPITAL.—2 P.M. Dr. S. Fenwick: Clinical and Pathological Demonstration to Senior Students.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICES.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

TO SUBSCRIBERS.

WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

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THE DIRT OF THE FARMER AND ITS DANGER TO MILK-SUPPLY.

A COUNTRY correspondent sends us the following disagreeable picture of the circumstances in which the milk-supply is obtained in the district where she resides:—"Cowsheds are dark, damp, and crowded; the ventilation is poor; the stench thick, hot, and heavy; the bedding of cows is scanty and hardly ever renewed; the drainage bad. The animals lie on moist bedding and get caked with manure both sides of their bodies; their udders are also caked with it. During winter they are shut up for months at a time, only walking to a trough (once or twice a day) in their yard to drink. They have no exercise all these months. Being thickly clothed in hair and naturally out-door creatures the imprisonment debilitates them, causes disease, and many die during calving in the spring; their milk becomes thin. Cowsheds should be better drained and ventilated; there should be windows that will open on the south side of every one of them in such a position that the sunlight will stream in upon each cow and upon its bedding. Stables are hardly ever built without windows, and yet horses, in my opinion, are not as valuable creatures to mankind as cows. If there are not windows in fowl-houses poultry suffer from disease. Cows should be made to walk along a road for a mile every day during all the worst days of their winter imprisonment. Milk is defiled by the hands of milkers and the extraneous matter found in it comes from the hands of the men who milk the cows. Cow-boys and farmers have the dirtiest employments possible. They attend to cows calving and to sheep and pigs and horses, and constantly cart manure about. All their implement-handles are caked with filth of every sort, but they never wash their hands before going to milk. Their hands are quite a loathsome sight, so caked and brown and hard are they with dirt. They have to soften them when milking by rubbing them together with milk and then they continue to milk, their hands dripping with blackened milk. I have been told this by several observers. These men also go out to milk from homes where members of their families have fevers of all sorts, though I am aware of the order that they are not to do so. Fathers, mothers, and brothers of children suffering from infectious diseases go to milk cows. They also suffer from all sorts of terrible things themselves and their filthy hands convey the diseases not only to the udders of cows and infect them, but to the milk, and yet the bodies of milkers are never inspected! These men never wash, such a thing as a bath is never taken by any farmer, any member of his family, or any labourer, they only wash their faces on rising in the morning. Farmers ought to be made to provide soap at the farmyard trough or pump, and to see that milkers wash their hands before they go to milk twice a day. The employers should be made to provide a bath in some shed and to see that each labourer has a bath every Saturday night. A farmer should be fined (under the Adulteration Act) if any extraneous matter is found at the bottom of his milk-cans. There is a very great fuss made about drains and quite rightly so, but ninety-nine-hundredths of the milk consumed never enters any dairy whatever. It is first of all milked into a tin pail (in winter in a cowshed and in the summer in the field) and it is on the spot poured into a tall milk-can which has a cover to it and the contents of which are never meddled with at all till it arrives either by cart or train at the shop or station where the milkman who buys it of the farmer empties it into his own large cans and it is taken round to customers at once."

THE HOUSE SURGEON'S FEES UNDER THE EMPLOYERS' LIABILITY ACT.

To the Editors of THE LANCET.

SIRS,—Will you kindly give me your opinion upon the following? A man was admitted to this institution suffering from an injury sustained while at work. Some time after a medical man called to find out the nature of the injury and probable date of discharge, stating that his inquiry was in connexion with "The Workmen's Compensation Act." I declined to give any information and said I was quite prepared to furnish a report. Would you kindly state if I was acting correctly? I should be very sorry to do anything which would give a brother practitioner just cause to complain of my conduct towards him, but it seems to me that it is *ultra vires* to expect me to supply information gratis for which formerly I should have received a fee. If, however, you think that such information should not be withheld I shall be very pleased to apologise to the gentleman in question and tell him all he wants to know.

I am, Sirs, yours faithfully,

Dec. 7th, 1898. HOUSE SURGEON.

*** Our correspondent is under no legal obligation, so far as we know, to give information.—ED. L.

A "BLOWER" FOR CAPILLARY TUBES.

A CORRESPONDENT asks us what is the best apparatus to expel vaccine lymph from the tube. A sample of artificial blower for expelling lymph from capillary tubes has been submitted to us by the Jenner Institute for Calf Lymph, 73, Church-road, Battersea, S.W. The institute gives these blowers to any practitioner who cares to apply for one. The glass tube is packed with carbolised wool to arrest any suspended dust in the air passing through it. We have tested the sample sent to us and find it efficient.

ALLEGED ILLEGAL OPERATION BY A NURSE.

ON Dec. 7th Jane White, described as a nurse, was charged at the North London police-court with causing the death of a woman named Angelinetta. Inspector Drew gave evidence of the arrest on a charge of having performed an illegal operation. The prisoner was cautioned but said that she had done nothing illegal. She acknowledged that she knew Angelinetta and that she had had some pills from her (White). Inspector Drew searched the room and found two catheters, one wet with blood. This White admitted having used upon another woman. He also found pills, two more catheters and some forceps. Angelinetta died on Nov. 25th, the certificate stating that she had died from peritonitis following a natural miscarriage. The body is to be exhumed and the prisoner was remanded in custody.

A CHEMICAL IOTA.

To the Editors of THE LANCET.

SIRS,—In experimenting upon oil of eucalyptus lately I noted a few tiny facts. Of these the following may prove useful here and there if you think them worth printing in THE LANCET:—1. A section of india-rubber tubing put into the oil expands in less than 24 hours to about double its size. Upon withdrawal reduction commences and the original size is reached in 2 or 3 days. But if steeped in methylated spirits to extract the oil reduction becomes far advanced in about half an hour. If it be desired to pass a bit of tubing over anything having a diameter as great as or greater than its own, dip the tube-end in the oil for a minute or more and it can then with far less difficulty be made

to cover the object. This fact may be of use in the laboratory and elsewhere for a variety of purposes. Expansion also occurs if the rubber be placed in oil of turpentine or in paraffin lamp oil 2. Eucalyptus oil dissolves iodine in all proportions; thus liquor iodi fortis can be readily produced. So made it paints on the skin less evenly than when the oil and methylated spirits are used in equal quantity. The oil does little to remove recent iodine stains from the skin; but if, after using it, methylated spirits be rubbed on a distinct lessening of the stain results. 3. A little sublimed sulphur heated in the oil in a test tube becomes a pretty fluid globule bright yellow and mobile. On boiling for a second or two the globule dissolves and then the smell of H_2S is swiftly given off. I have not tried the solvent powers of this fluid, but I may add that as it cools the sulphur therein returns to the state of powder. I kept specimens of healthy and of albuminous urine in test tubes for several weeks last summer without decomposition by covering each specimen with a layer of eucalyptus oil as thick as a shilling.

I am, Sirs, yours faithfully,

Devonshire-street, Portland-place, W., Nov. 30th, 1898. E. DIVER.

JUDICIAL WIT.

HIS HONOUR JUDGE BACON has a reputation not altogether undeserved of being the "funny man" among county-court judges. This being so we are sorry to see him deliver himself in such a manner as is credited to him in the *Daily News* during the progress of a case tried before him on Dec. 8th. The plaintiff, a widow, brought an action against a baker for damages received by falling through the baker's coalhole, the covering parts of which had been left unfastened. Mr. Frederick J. Oxley said, according to the report in the daily press, that plaintiff had suffered from an attack of bronchitis induced by the shock. The lung was really a continuation of the bronchial tubes. Judge Bacon: "Oh! is it? Well, as a member of the College of Physicians you ought to know better than I do." We quite agree with Judge Bacon here, but as he holds such sound views why did he go on to say that "he could not accept without further evidence the statement of the doctor that bronchitis—which was something outside the system—could be induced by shock as gout might be. Gout was undoubtedly something within the system." What does his honour mean by "system" and why is bronchitis outside it, whatever "it" may be?

THE USE OF THE CAT.

AT Warwick on Dec. 8th the grand jury made the following presentment before Mr. Justice Mathew: "To the Hon. Sir James Charles Mathew. Warwick, Dec. 8th, 1898. The grand jury unanimously make presentment that, in view of the great and increasing number of cases at the assizes of criminal assaults on women and children, it is desirable and in their opinion necessary that Her Majesty's judges should be empowered by law to order corporal punishment in addition to any other that they may inflict in all cases in which in their opinion the evidence justifies it." His lordship said that he would forward the presentment to the Home Secretary but that it would not obtain his (the judge's) support.

"THE COLOUR OF NEWLY-BORN NEGRO CHILDREN."

To the Editors of THE LANCET.

SIRS,—With reference to the correspondence which has appeared in THE LANCET of Dec. 10th as to the colour of newly-born negro children I wish to endorse the statement of "Guiana." During four years' service in West Africa I delivered seven or eight negro women and in all cases the colour was that of a light quadroon. In two cases the children looked remarkably white but after a week the colour gradually changed and it would appear that atmospheric conditions were requisite to produce the full black colour of the negro. In three or four months the children were of copper tint and after a few years the change to black was complete. I further observed that the hair was somewhat straight, rather like that of the Hindoo, but its "woolly" character became evident in a few weeks.

I am, Sirs, yours faithfully,

D. J. MACCARTHY, late Gold Coast Medical Staff.

Dec. 13th, 1898.

PAY WARDS.

To the Editors of THE LANCET.

SIRS,—I shall feel very grateful if any of your readers will kindly favour me with information respecting the methods by which charity hospitals with "pay wards" in England are remunerated for medical or surgical services. Here, in the United States, I believe such institutions (and they are quite numerous) exact a certain sum for board, room, and nursing, allowing the honorary physician or surgeon to fix his own fee which, of course, is pocketed by him. This system is extremely advantageous to the honorary staff but very unfair, illiberal, and undemocratic to those practitioners in the neighbourhood who do not hold hospital appointments. Less fault might be found with the system if any reputable physician in the vicinity were accorded similar privileges, but there are few managers so charitably disposed. At best, however, it is a crude anomaly to witness two classes of patients under the same roof—one for sweet charity, the other for sordid gain. Pay-patients should be relegated to private hospitals and none but the poor should be admitted to those institutions which owe their origin and existence to the charity of the public.

I am, Sirs, yours faithfully,

J. HARRIS JONES, M.D. Brux., &c.

Wilkes-Barre, Pennsylvania, Nov. 23rd, 1898.

SENTENCE FOR ASSAULTING A DRESSER.

AT Southwark police-court on Dec. 9th Charles Pilford, a stall-keeper, was sentenced to two months' hard labour for assaulting his wife and to fourteen days' hard labour for assaulting Mr. E. Goble, a dresser at Guy's Hospital. The prisoner had beaten his wife so severely that she had to be taken to the hospital to have her injuries attended to. He accompanied her and behaved in an outrageous manner in the surgery. Mr. Goble requested him to leave whereupon Pilford struck him twice in the face. We must say for the credit of the class that generally frequents public hospitals that it is very rare for either a patient or the friends of a patient to behave otherwise than well. When, however, they do offend it is an offence which cannot be lightly passed over.

"IL FAUT SOUFFRIR POUR ÊTRE BELLE."

THE London correspondent of the *Sheffield Daily Telegraph* states, according to an editorial paragraph in the issue of Dec. 9th, that a well-known society beauty has just had the "outer skin of her face removed with a view of renewing her complexion." The operation is not only "painful but tedious, because it is done by pin-prick, as one may say. The whole of the outer skin is removed in this way, and if the operation is successful the patient emerges with a face of bewitching brilliance. That is the result of the present case. ..... Few people know, but anyone can see that her complexion has been remade. ....." We must congratulate the editor of the *Sheffield Daily Telegraph* upon possessing a correspondent who exhibits such enterprise. The story is as pretty as the new face.

WANTED A HOME FOR A RESIDENT LUNATIC.

To the Editors of THE LANCET.

SIRS,—I should feel obliged by you or any of your readers informing me where in this district an insane patient can be received. The patient's husband is prepared to pay to the amount of two guineas a week.

I am, Sirs, yours faithfully,

Boston, Lincs., Dec. 13th, 1898. J. WELSH, L.S.A. Lond.

A MISLEADING ADVERTISEMENT.

A CORRESPONDENT sends us the following cutting from the *Queen* of Dec. 3rd, p. 979:—

> "A graceful figure can be achieved by using the Amiral Soap for reducing corpulency by external local application. Recommended by the medical profession and the 'Lancet.' No diet. No discomfort. To be obtained through all chemists, or direct from the Amiral Soap Syndicate, 28A, Basinghall-street, E.C., on receipt of 8s. for box of two tablets. Pamphlet and copy of testimonials on application. West End depôt, 20, Brook-street, W.—[Advt.]"

"Surely it can't be true" is his comment. He is right. We have not recommended "Amiral" Soap. What we did say will be found in THE LANCET of July 30th, 1898, p. 266.

Floating Kidney.—In a few cases a pad and abdominal belt will give decided relief in floating kidney, but in most of the cases very little benefit is felt; unfortunately it is not possible to say beforehand whether this pad and belt will do good, so in any case in which an operation is undesirable it is well worth while to try a belt. In applying the belt it requires to be of a particular degree of tightness to give the most comfort.

Memo.—There are so many books upon the subject that our correspondent had better consult the list given in THE LANCET of Sept. 3rd, 1898. Perhaps we might recommend as an elementary work "Elementary Practical Bacteriology," by Kanthack and Drysdale; Macmillan and Co., price 4s. 6d. Another good book is "The Principles of Bacteriology," by Dr. A. C. Abbott.

Treatment.—We do not give medical advice. If, as we understand, our correspondent is a medical student he should have no difficulty in finding a qualified man to enlighten him.

Mr. Furner's communication was duly received.

During the week marked copies of the following newspapers have been received: *Manchester Courier, East Anglian Daily Times, Bradford Observer, Croydon Guardian, Rochdale Observer, Rangoon Times, Penrith Observer, Rugby Advertiser, Lichfield Mercury, Pioneer Mail, Architect, Times of India, Ayr Advertiser, Eastern Morning News, Yarmouth Advertiser, Builder, Citizen, East Sussex News, Scotsman, Liverpool Daily Post, Warwick Advertiser, Western Morning News, Kenilworth Advertiser, Auckland Chronicle, Blackpool Gazette, Scarborough Mercury, Birmingham Gazette, Ossett Observer, Cambs Times, Portsmouth Times, Yorkshire Post, Irish Times, Leeds Mercury, Brighton Gazette, Derby Mercury, Duffield Observer, Cheltenham Examiner, Hastings Times, Bristol Mercury, Abingdon Herald, Norwich Journal, Dereham Times, Echo, Daily Chronicle, Sanitary Record, Mining Journal, City Press, Reading Mercury, Local Government Chronicle, Hertfordshire Mercury, Weekly Times and Echo, Bulawayo Chronicle, Surrey Advertiser, Local Government Journal, Public Health, Kentish Express, Public Opinion, Friendly Societies' Recorder, Lincoln Leader, South-Western Comet, Bridport News, Barrow Herald, Doncaster Gazette, Maidstone Journal, Berkshire Chronicle, Louth and North Lincolnshire Advertiser, &c., &c.*

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Y.—Dr. I. Burney Yeo, Lond.

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Cheques and Post Office Orders (crossed "London and Westminster Bank, Westminster Branch") should be made payable to the Manager, Mr. CHARLES GOOD, THE LANCET Office, 423, Strand, London, to whom all letters relating to Advertisements or Subscriptions should be addressed.

THE LANCET can be obtained at all Messrs. W. H. Smith and Son's and other Railway Bookstalls throughout the United Kingdom. Advertisements are also received by them and all other Advertising Agents.

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